

Archaeological and Cultural Heritage Impact Assessment –

**Samy's Wholesalers Extension, Erf 44500,
Kimberley, Sol Plaatje Municipality, Northern Cape**

- 10 February 2015 -

Report to:

Phillip Hine (South African Heritage Resources Agency – SAHRA APM Unit)

E-mail: phine@sahra.org.za; Tel: 021 462 4502; Postal Address: P.O. Box 4637, Cape Town, 8000

Tom Pillay (P&V Family Trust)

E-mail: sales@samys.co.za; Tel: 082 460 0662; Postal Address: P.O. Box 3109, Kimberley, 8300



Prepared by:

Karen van Ryneveld (ArchaeoMaps)

E-mail: kvanryneveld@gmail.com; Tel: 084 871 1064; Postal Address: Postnet Suite 239, Private Bag X3, Beacon Bay, 5205

Specialist Declaration of Interest

I, Karen van Ryneveld (Company – ArchaeoMaps; Qualification – MSc Archaeology / GIS Diploma), declare that:

- I am suitably qualified and accredited to act as independent specialist in this application;
- I do not have any financial or personal interest in the application, its' proponent or any subsidiaries, aside from fair remuneration for specialist services rendered; and
- That work conducted has been done in an objective manner – and that any circumstances that may have compromised objectivity have been reported on transparently.



Signature –

- 10 February 2015 -

Archaeological and Cultural Heritage Impact Assessment –
Samy's Wholesalers Extension, Erf 44500,
Kimberley, Sol Plaatje Municipality, Northern Cape
 Executive Summary

Terms of Reference -

ArchaeoMaps have been appointed by the project proponent, Tom Pillay on behalf of the P&V Family Trust, to prepare the SAHRA requested HIA and Social Consultation reports as requested in the SAHRA Interim Comment (dated 5 January 2015). The proposed project, the *Samy's Wholesalers Extension* development, comprises the construction of a warehouse facility on Erf 44500, Kimberley North, Sol Plaatje Municipality, Northern Cape. The development is situated at general development co-ordinate S28°43'53.0"; E24°45'57.8" with the study site measuring 0.164ha in extent.

The Archaeological and Cultural Heritage Impact Assessment -

Study Site: *Samy's Wholesalers Extension* development, Erf 44500, Kimberley, Northern Cape [1:50,000 Map Ref – 2824DB].

Coverage & Gap Analysis: The SAHRA requested HIA comprises an AIA only, including a pre-feasibility study, field assessment and social consultation and should be read in accordance with the commissioned specialist GPR scan study.

Summary:

○ **Archaeological and Cultural Heritage Impact Assessment (AIA)**

The *Samy's Wholesalers Extension*, Erf 44500, study site, inferred to comprise part of an 1870's 'Black' migrant worker cemetery, with primary evidence in support of the hypothesis comprising the mitigated remains of 13 skeletons from the immediate vicinity of the study site and a Diamond News, 1879, report on the sanitary condition of Kimberley referring to the said cemetery as situated 'in close proximity' to the European (Pioneer) cemetery is contested, based on a literature supported interpretation of cartographic CSG Records of early Kimberley. It is proposed that the area in question formed part of an early Black residential area and that human remains exhumed reflect LIA burial practice of burial at a homestead. The 'Black' migrant worker cemetery is suggested to have comprised the 1889 demarcated Lot 88-104 property.

○ **GPR Scan Results**

GPR scan results prove conclusively that no high or lower density subsurface disturbance patterns are reflective of an underlying cemetery at the *Samy's Wholesalers Extension*, Erf 44500, Kimberley, study site. No identified subsurface disturbance represents a grave-like feature or features. Feature H comprises the remains of a floor slab of a 1940's structure, with the structure having been demolished in the 1980's.

○ **Social Consultation**

No attendees claimed to have a direct ancestral or cultural interest in the inferred burial site [NHRA 1999, Section 36(5)]. The literal 'hijacking' of the *Heritage Consultation* meeting for Ward purposes came with evident negative effect to attendees not being residents / with a 'bona fide' ward interest; attendees who attended in terms of the NHRA 1999, Section (38)(3)(e) were *en large* denied their right to consultation and information. A noticeable change in attitude by residents / parties with a 'bona fide' ward interest, from sensitivity and ethical concerns during fieldwork to a primarily 'We don't know them – we don't care' attitude towards inferred early Pioneers buried at the site, from the time of fieldwork to the *Heritage Consultation* alludes to initial pretense, cautioning against heritage being used for ulterior motives.

Recommendations -

1. It is recommended that development proceeds as applied for without the developer having to comply with additional SAHRA / NBYKB compliance requirements: Development will not impact on any identified graves; Feature H (S28°43'52.7"; E24°45'56.8) comprises the remains of a 1940's floor slab of a recorded demolished structure (1980's). It is recommended that development proceed without the developer having to apply for a NBYKB site destruction permit.
2. It is requested that the NBYKB revoke the NBYKB 'Cease Work Order' issued to the project proponent on 16 October 2014.
3. It is requested that SAHRA revoke the SAHRA 'Cease Work Order' issued to the project proponent on 6 February 2015.
 [Digital copies of 'Cease Work Order' withdrawals should be forwarded to ArchaeoMaps (e-mail: kvanryneveld@gmail.com), to reach the ArchaeoMaps offices no later than close of business day (16:00), 20 February 2015. Original documents should be forwarded to: Tom Pillay, P&V Family Trust, P.O. Box 3109, Kimberley, 8300 (courier or registered post)].
4. It is requested that SAHRA issue a positive Heritage Impact Assessment (HIA) Comment, based on the findings of the Archaeological and Cultural Heritage Impact Assessment (AIA) as contained in this report, with reference to the specialist GPR study, no later than close of business day (16:00), 27 February 2015.
 [With cognizance to concerns raised with respect to 'conviction' and implied effect of the results of this study on possible conservation and research proposals, SAHRA, the NBYKB or any third party wishing to conduct tests (or inspections) to verify the heritage status quo of the study site in question is requested to consult directly with ArchaeoMaps. Test proposals by third parties not affecting the above time frame requirements for a SAHRA HIA Comment will be considered, if and where applicable in direct consultation with SAHRA / the NBYKB. Any test shall be to the cost of the party proposing the test / inspection.]

Contents

1 - Terms of Reference.....	5
1.1.1) Development Details and Process to Date.....	6
1.1.1.1) The Sales Agreement and Development Programme	6
1.1.1.2) Environmental Compliance	8
1.1.1.3) Heritage Compliance	8
1.1.1.4) Sol Plaatje Municipality – Building Control Unit Authorizations	9
1.1.1.5) The NBYKB ‘Cease Work Order’ – 16 October 2014	14
1.1.1.6) Developer Compliance to the NBYKB ‘Cease Work Order’ Requirements	15
1.1.1.7) ArchaeoMaps to follow up on a Response from SAHRA	15
1.1.1.8) Construction Commencing	16
1.1.1.9) The SAHRA Interim Comment	16
1.1.1.10) Appointment of Engelsman, Magabane Incorporated (EIM).....	17
1.1.1.11) SAHRA ‘Cease Work Order’ – 6 January 2015	18
1.1.1.12) Department of Labour ‘Cease Work Instruction’ – 8 January 2015	18
1.1.1.13) The GPR Scan	19
1.1.1.14) Heritage Consultation	19
2 - Archaeological and Cultural Heritage Impact Assessment.....	20
2.1 - General Information	20
2.1.1) Assessor Accreditation.....	20
2.1.2) Site Significance Assessment and Ratings.....	20
2.2 - Pre-feasibility Assessment	21
2.2.1) Pre-feasibility Summary	21
2.2.2) Databases, Site Information and Hypotheses.....	21
2.2.2.1) The SAHRA 2009 MPD and SAHRIS	21
2.2.2.2) General Discussion	23
2.2.2.3) Hypothesis 1 – Erf 44500 as Part of the ‘Black’ Migrant Worker Cemetery (1870’s / 1879)	25
2.2.2.4) Reconsidering Maps.....	27
2.2.2.5) Hypothesis 2 – Erf 44500 as part of an early Black residential area with identified graves reflecting LIA burial custom of burial at a homestead	38
2.3 - Field Assessment.....	40
2.4 - GPR Scan Summary	43
2.5 - Heritage Consultation.....	45
2.5.1) Results of the Heritage Consultation	46
3 - Conclusion and Recommendations.....	50
3.1 - Conclusion	50
3.1.1) Comment on the Heritage Compliance Process.....	51
3.2 - Recommendations.....	53
3.2.1) Samy’s Wholesalers Extension development, Erf 44500, Kimberley, Northern Cape.....	53
4 - Acronyms and Abbreviations.....	54
5 - References.....	55

Appendix A:

Schematic Outline of the Pre-Colonial and Colonial Periods

Appendix B:

Introduction to the Archaeology of South Africa

List of Figures:

Figure 1: The 3 building Authorizations dated 9 October, 6 November and 8 December 2014 respectively	11
Figure 2: Rezoning of Erf 44500 (courtesy Griviaris & Saaiman).....	12
Figure 3: Rezoning of Erf 44500 (courtesy Equilibrium)	13
Figure 4: Heritage Consultation notices.....	46
Figure 5: Heritage Consultation – Attendance Register	49

List of Maps:

Map 1: General locality of Erf 44500 – 1:50,000 Map Ref – 2824DB	5
Map 2: Sol Plaatjie Municipality – SDF 2013, indicating the general locality of Erf 44500 (SPM – SDF 2008)	7
Map 3: Erf 44500 in relation to the Samy's Wholesalers depot (2004) development and the Neotel (2012) alignment in the vicinity of the study site, with specific reference to Lawrence Road	9
Map 5: Map of Kimberley North, Vooruitzigt 81, 1879 (CSG Record 2340/1879).....	30
Map 6: Map of Beaconsfield (later Kimberley South), Bultfontein 80, 1885 (CSG Record 894/1885)	31
Map 7: Map of Kimberley, circa 1895 (Mabin 1986), with inserts from Gaigher (2014) – top 1: 50,000 map 1941, bottom 1: 50,000 map 1986	32
Map 8: Deduction Plan No 261 of Kimberley North, Vooruitzigt 81, 1879 (CSG Record 2340/1879)	33
Map 9: Deduction Plan No 261, Sheets 6 & 7, Kimberley North, Vooruitzigt 81, 1879 (CSG Record 2340/1879)	34
Map 10: The 'Deed of Grant – KimF1-12' area, Kimberley North, 1889 (CSG Record 6658-8/1889).....	36
Map 11: Extract from the 'Deed of Grant – KimF1-12' area, Kimberley North, 1889 (CSG Record 6658-8/1889).....	37
Map 12: Results of the fieldwork	40
Map 13: Locality of Object 'A' in relation to the Erf 44500, Kimberley, study site	44
Map 14: On-site GPR scan results of Erf 44500, Kimberley	44

List of Plates:

Plate 1: View of the Erf 44500 study site [1].....	41
Plate 2: View of the Erf 44500 study site [2].....	41
Plate 3: The spoon uncovered at SWE-1	41
Plate 4: View of the Erf 44500 study site [3]	41
Plate 5: View of the Erf 44500 study site [4]	42
Plate 6: View of the Erf 44500 study site [5]	42
Plate 7: View of the Erf 44500 study site [6]	42
Plate 8: View of the Erf 44500 study site [7]	42

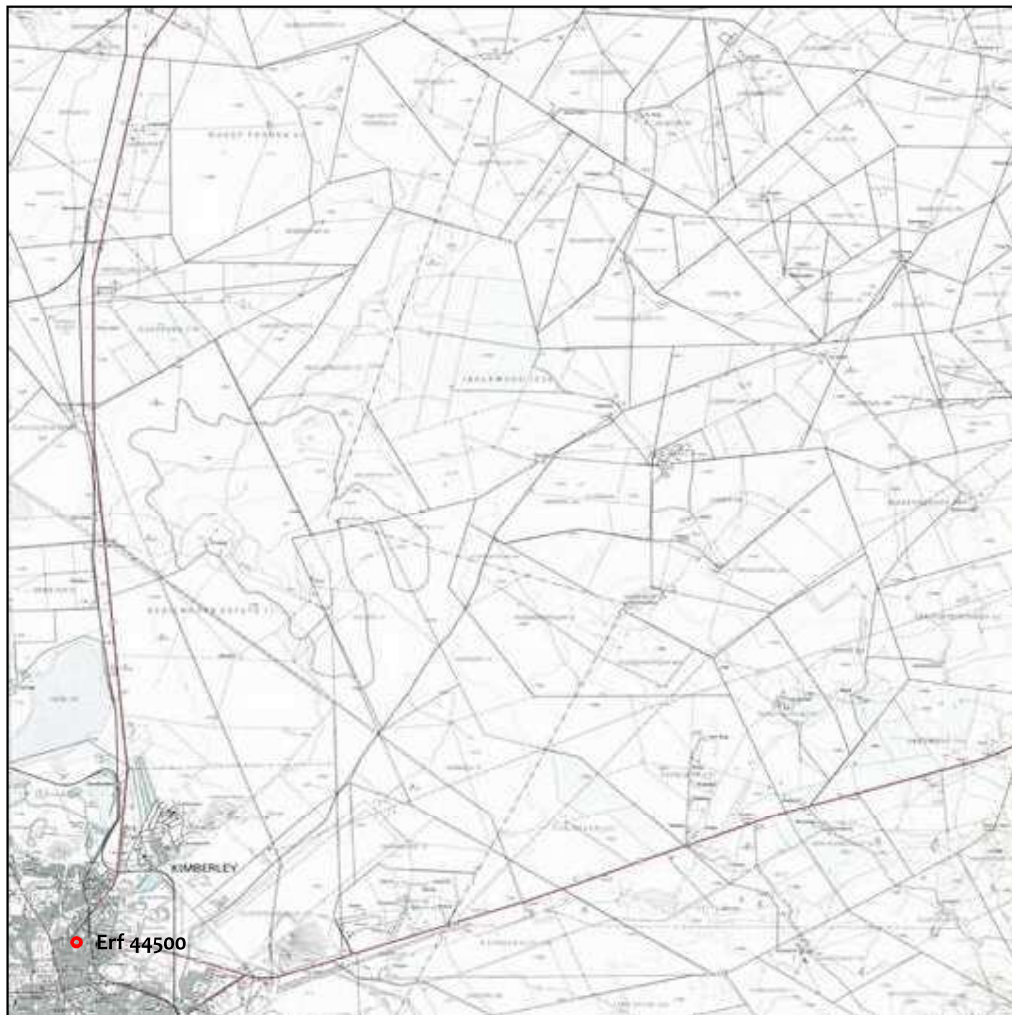
List of Tables:

Table 1: SAHRA archaeological and cultural heritage site significance assessment ratings and associated mitigation recommendations	20
Table 2: Archaeological and basic cultural probability assessment.....	21
Table 3: Deduction Plan No 261, Sheet 13, Kimberley North, Vooruitzigt 81, 1879 (CSG Record 2340/1879).....	35

1 - Terms of Reference

ArchaeoMaps cc (ArchaeoMaps) have been appointed by the project proponent, Tom Pillay on behalf of the P&V Family Trust, to prepare the South African Heritage Resources Agency (SAHRA) requested Heritage Impact Assessment (HIA) and Social Consultation reports as requested in the SAHRA Interim Comment (dated 5 January 2015). The proposed project, the *Samy's Wholesalers Extension* development, comprises the construction of a warehouse facility on Erf 44500, Kimberley North, Sol Plaatje Municipality, Northern Cape. The development is situated at general development co-ordinate S28°43'53.0"; E24°45'57.8" with the study site measuring 0.164ha in extent.

A SAHRA HIA comprises at minimum of a palaeontological (PIA) and archaeological (AIA) assessment, for which formal assessment processes and minimum standards are in place (SAHRA 2007). According to the SAHRIS palaeontological sensitivity map the study site is situated in a palaeontological insignificant area; no PIA is required. The requested HIA therefor comprises an Archaeological and Cultural Heritage Impact Assessment (AIA) only, including a pre-feasibility study, field assessment and social consultation and should be read in accordance with a commissioned specialist Ground Penetrating Radar (GPR) scan study.



Map 1: General locality of Erf 44500 – 1:50,000 Map Ref – 2824DB

1.1.1) Development Details and Process to Date

1.1.1.1) The Sales Agreement and Development Programme

The sales agreement between Pillay and the SPM was done in accordance with the *Sol Plaatje Municipality – Policy on Land and Other Immovable Capital Assets* (SPM – PLOICA 2013). The Policy states that:

- [4.4] The implementation of these policy principles will be used to enhance and not stifle economic development.
 - [4.5] The Council¹ may dispose of land or other immovable capital assets only once it is satisfied that such an asset is not needed to provide the minimum level of basic municipal service and that it has considered fair market value for the asset and the economic and community value to be received in exchange for the asset, in accordance with Section 14(2) of the MFMA² and Council has complied with subsections (1) and (6) thereof.
 - [4.6] A decision by the Council that a specific capital asset is not needed to provide the minimum level of basic municipal services may not be reversed by the Municipality after the asset has been sold, transferred or otherwise disposed of.
 - [5.2] The disposal of capital assets shall be subject to a public participation process envisaged in paragraph 8 of this Policy; this will only be applicable if the asset to be disposed of is above the Council approved threshold of R1 million.
 - [5.12] Capital assets may be sold or leased out-of-hand in exceptional cases where Council is of the opinion that public competition would not serve a useful purpose or that it is in the interest of the community.
- Annexure: A – Alienation of Land: Conditions of Sale
- [1.1] All cost pertaining to a transaction shall be borne by an applicant, e.g. survey, re-zoning, subdivision, consolidations, advertisements, relocation or provision of services, except in cases where Council initiates the transaction for its own benefit.
 - [1.5] When an immovable asset is sold, development must commence within five (5) years from the date of transfer, or possession taken, or in accordance with the provisions of the deed of sale or the development programme submitted by the purchaser and be completed in accordance with the provisions of the deed of sale or the development programme.
 - [1.8] The immovable asset may only be used for the purpose as approved by Council and purposes regularised by town planning schemes.

The Deed of Sale has been registered in the project proponent's name with the Deed of Transfer pending. This based on a concern raised by Pillay with regards to a commercial price (R820,000.00 incl. VAT) charged for the property, not zoned accordingly. Costs relating to subdivision, consolidation and rezoning has been covered by the Pillay. The *Samy's Wholesalers Extension* development is in direct accordance with the development programme submitted by Pillay, approved by the Sol Plaatje Municipality (SPM) as condition to the sales agreement.

The development programme submitted by Pillay is in accordance with the *Sol Plaatje Municipality – Spatial Development Framework* (SPM – SDF 2008), with Erf 44500 situated in an area demarcated as 'Residential Densification':

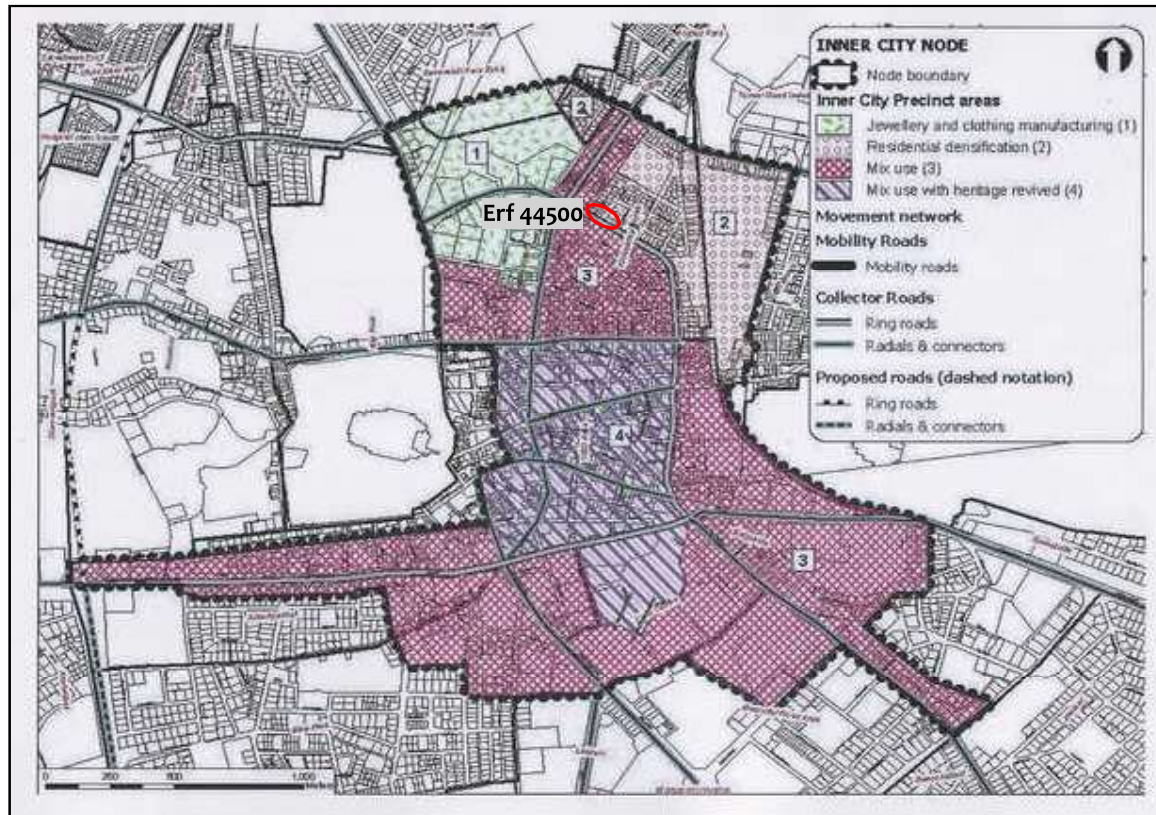
The study site, situated on the very perimeter of the demarcated area and adjoining a largely already developed 'mixed-use' area is not only deemed suitable, but contributory to the SPM's development plans. Samy's Wholesalers was started in 1993 and is the largest snack and confectionary retail / wholesale store in the Northern Cape and Free State. In 2008 Samy's Wholesalers was accepted by Independent Buying Consortium as a member of the company diversified in the FMCG market and carried a wide range of groceries which complemented the store to be a fully-fledged HYBRID store. Expansion of the store is inferred to make a positive contribution to development of the area, providing well-priced products, in close proximity, not only to the public but also to possible café, restaurant and mini-market initiatives that may

¹ Council of the Sol Plaatje Municipality

² Municipal Finance Management Act, No 56 of 2003 (MFMA 2003)

be established. The *Samy's Wholesalers Extension* development will provide at least 29 permanent jobs, again addressing principles of residential densification relating to 'lifestyle' with reference to opportunities afforded within densification areas.

The SPM – SDF (2008) provides for an integrated management approach to development, including environmental and heritage aspects. The Erf 44500 study site is not situated within a SPM – SDF demarcated heritage zone.



Map 2: Sol Plaatjie Municipality – SDF 2013, indicating the general locality of Erf 44500 (SPM – SDF 2008)

Introducing 'Residential Densification': Residential densification can simply be defined as *'...making more efficient use of our limited urban space – in other words finding place for more people to live and work'* (CPT 2009). Densification directly addresses economic efficiency and productivity of the urban form and function. It aims to provide efficient, safe, sustainable cities that offer high quality public spaces, access to public transport, services and recreation opportunities, and in many instances address issues of inequality – only possible if a city is dense and compact. The very principle of residential densification is in direct opposition to 'urban sprawl', with one of the main culprits being the dominance on single family homes, increasingly necessitating a need to curb *'the concrete jungle from encroaching on nature'*. Urban sprawl has reached unprecedented standards in recent decades, having resulted in cities becoming unmanageable and inefficient, with specific reference to travelling distances, associated time and cost, increasing levels of pollution and additional costs to consumers and suppliers, in turn causing economic slumps in inner city environs as suppliers follow customers for purposes of convenience (Setplan 2008). Tshwane (2005) states: *'The concept of the compact town or city establishes an urban, as opposed to suburban or township model as the dominant model of development.'*

Residential densification is associated with both horizontal and vertical expansion, more than often with an emphasis on the vertical, directly related to the inherent development possibilities therein. But residential densification is never restricted to the 'residential' faculty only; it is best implemented with the inclusion of 'mixed-use' areas with specific reference to the emphasis on the standard of living of residents: Shops, gyms, recreation areas, green spaces and sport facilities are crucial lifestyle components (CPT 2009). Opposition to densification often include that these more dense environments become unhealthy, aesthetically unpleasing and dangerous, and go hand in hand with a decrease in property values. However, successful implementation of densification programmes has shown the opposite to be the case (CPT 2009; Setplan 2008; Tshwane 2005).

Densification does not imply overnight transformation. It is generally achievable over extended periods of time and more than often associated with government intervention: Government need to lead the way in which the urban structure of a city is developing. Implementation of plans is crucial to the success of these programmes, for which governments are directly dependant on public and private sector investment. The Tshwane (2005) document comments on the fact that strategies should be devised to ensure that developers invest closer to strategic areas, including amongst others the fast tracking / streamlining of land-use applications in areas demarcated for densification.

1.1.1.2) Environmental Compliance

The *Samys' Wholesalers Extension* development, Erf 44500, Kimberley, is exempted from Environmental Impact Assessment (EIA) requirements with specific reference to the National Environmental Management Act, No 107 of 1998 (NEMA 1998), 2010 Regulations, No R544 (GG 33306), Listing Notice 1:

- [23] The transformation of undeveloped, vacant or derelict land to –
 - (1) Residential, retail, commercial, recreational, industrial or institutional use, inside an urban area, and where the total area to be transformed is 5 hectares or more, but less than 20 hectares, except where such transformation takes place for linear activities.
- [24] The transformation of land bigger than 1,000 square meters in size, to residential, retail, commercial, industrial or institutional use, where, at the time of the coming into effect of this Schedule such land was zoned 'open space', 'conservation' or had an equivalent zoning.

1.1.1.3) Heritage Compliance

The National Heritage Resources Act, No 25 of 1999 (NHRA 1999), Section 38 states:

- [1] Subject to the provisions of subsections 7), 8) and 9), any person who intends to undertake a development categorized as –
 - (a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
 - (b) the construction of a bridge or similar structure exceeding 50m in length;
 - (c) any development or other activity which will change the character of a site –
 - (i) exceeding 5,000m² in extent; or
 - (ii) involving three or more existing erven or subdivisions thereof; or
 - (iii) involving three or more erven or subdivisions thereof which have been consolidated within the past five years; or
 - (iv) the costs which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
 - (d) the rezoning of a site exceeding 10,000m² in extent; or
 - (e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority,
 must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

Despite the project proponent's ignorance to the details of the NHRA 1999, Section 38(1), Pillay has displayed a general sensitivity towards heritage. In 2004 during construction of the Samy's Wholesalers depot parking lot skeletal remains were accidentally uncovered. Upon the incident Pillay contacted the South African Police Service (SAPS): Initially identified skeletal remains were exhumed but when the 2nd skeleton was uncovered and upon realization that remains were not of forensic, but of archaeological nature, the case was referred to Dr. David Morris, McGregor Museum. Phase 2 mitigation was reported on by Morris (2004). The Morris (2004) report was 1st brought to the attention of the project proponent on 20 November 2014 as attachment in an ArchaeoMaps e-mail to SAHRA, cc'd to Pillay. In 2012 during Neotel Phase 2 mitigation work along Lawrence Street Pillay informally discussed 'archaeological assistance' with Morris, disclosing his intention for development at the Erf 44500 property (Pers. Comm.: Tom Pillay, P&V Family Trust).



Map 3: Erf 44500 in relation to the Samy's Wholesalers depot (2004) development and the Neotel (2012) alignment in the vicinity of the study site, with specific reference to Lawrence Road

1.1.1.4) Sol Plaatje Municipality – Building Control Unit Authorizations

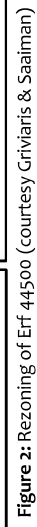
Application for the construction of the *Samy's Wholesalers Extension* development, Erf 44500, Kimberley, was made to the Sol Plaatje Municipality (SPM), Department of Strategy, Economic Development and Planning – Building Control Unit (BCU). The SPM – BCU, upon approval of submitted building plans (SK2892/1) issued a Provisional Authorization for development to proceed, dated 9 October 2014 (Ref No 642/14), with the Authorization effective for a 30 day period. Conditions of the Authorization included amongst others that construction work shall be erected with no deviation to the original plans submitted to Council and that the Authorization is conditionally granted based on proof of application for rezoning submitted to the SPM town planning section.

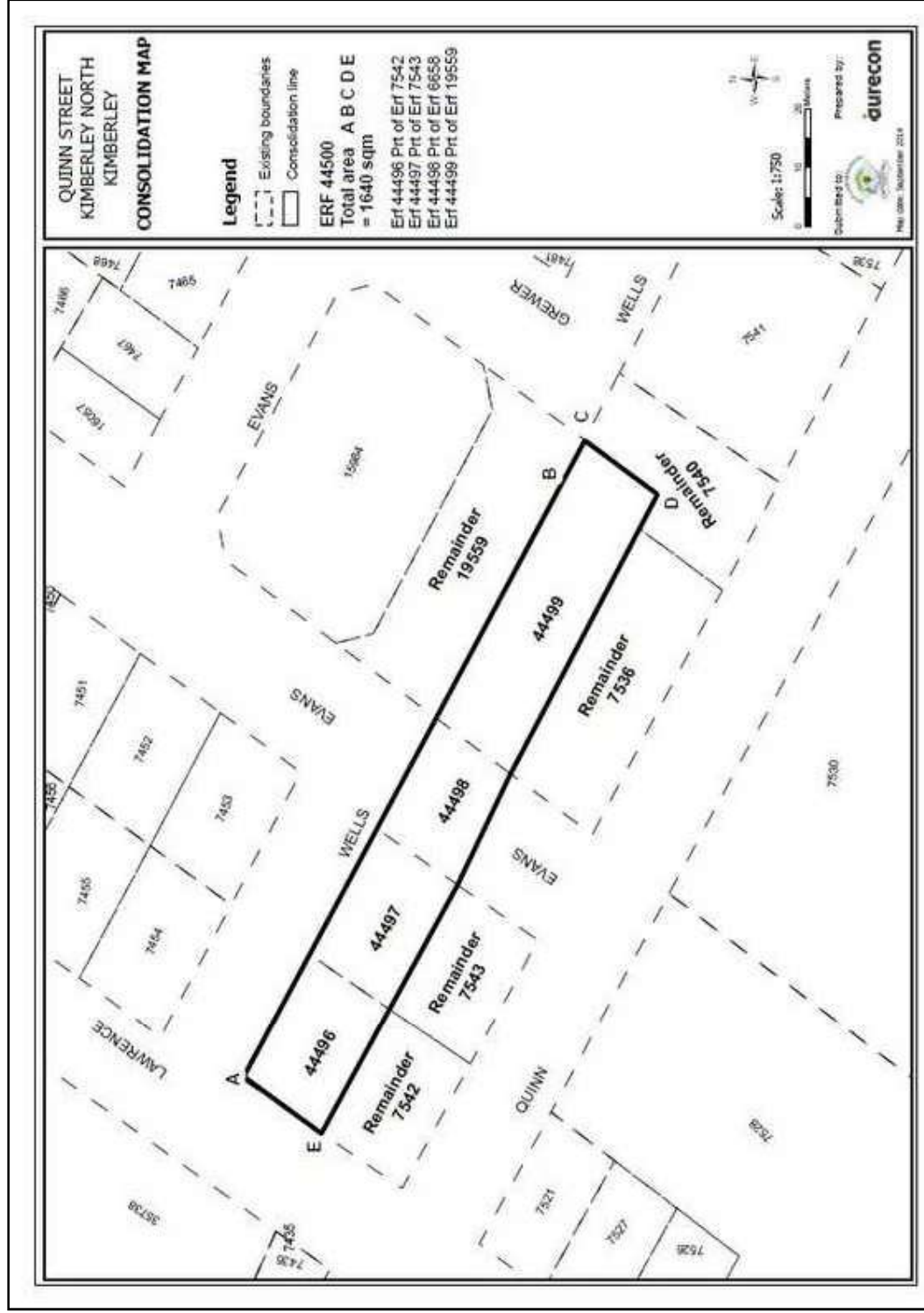
Details of Consolidation and Rezoning: Erf 44496 (portion of Erf 7542) Kimberley = 343m² [originally zoned 'residential']; Erf 44497 (portion of Erf 7543) Kimberley = 343m² [originally zoned 'residential']; Erf 44498 (portion of Erf 6658) Kimberley [originally zoned 'street'] and Erf 44499 (portion of Erf 19559) Kimberley = 723m² [originally zoned 'public open space'] = Total consolidated area = 0.164ha / 1,640m². The rezoning application was submitted to the SPM town planning section on 22 September 2014.

Development commenced on 16 October 2014. On the said date Pillay was issued with a 'Cease Work Order' by Ngwao-Boswa Ya Kappa Bokone (NBYKB). Based on requirements stipulated in the 'Cease Work Order' the developer applied for an extension to the SPM – BCU Authorization. On 6 November 2014 the SPM – BCU issued an extended Authorization, again valid for 30 days. As a result of time lapsed with respect to heritage compliance commenting timeframes as stipulated in the NBYKB 'Cease Work Order' the developer applied for a 3rd extension to the Authorization, issued by the SPM – BCU on 8 December 2014 and valid for a 60 day period.

Application for a 4th extension has been authorized by the SPM – BCU, with an expiration date of 6 April 2015.

Figure 1: The 3 building Authorizations dated 9 October, 6 November and 8 December 2014 respectively





1.1.1.5) The NBYKB 'Cease Work Order' – 16 October 2014

Issued by Andrew Timothy, Ngwao-Boswa Ya Kappa Bokone (NBYKB), after notification of construction work by Morris, the 'Cease Work Order' to Pillay, dated 16 October 2014 state that: '*... The site in question is said to be 100% cemetery, 1870's burial ground in Kimberley North (mostly built upon more than a century [ago]) that was recommended for heritage site declaration in 2004. The area was accidentally disturbed (costly salvage) in 2012 and sold somewhere in 2013 for intended development.*' The 'Cease Work Order' then directs the developer to the NHRA 1999, Section 38 process. It stipulates: 'The NC PHRA therefor issue you with this notice to temporary stop or cease the above development to allow the NC PHRA and the SAHRA to: (a) salvage the heritage resource in danger; (b) investigate alternatives to the destruction of the heritage resource; or (c) designate the heritage resource pursuant to the Act.' The 'Cease Work Order' stipulated developer requirements, including completion of the attached Notification of Intent to Develop (NID), the commissioning of a Heritage Impact Assessment (HIA) and submission of proof of community / public consultation. The NBYKB further states that the NBYKB shall '*... within 14 days of receipt of a notification in terms of Section 38, Subsection 1, notify the developer or applicant of the decision of the Provincial Heritage Resources Authority Permit Committee as well as comments by the South African Heritage Resources Agency*'.

Timothy consulted directly with Colette Scheermeyer, SAHRA Manager: Archaeology, Palaeontology and Meteorites Unit (APM Unit) regarding suitable professional consultancies / specialists to conduct the requested HIA (e-mail communication – 20 October 2014).

Concerns with the NBYKB 'Cease Work Order' pertains to it not having been issued in terms of the NHRA 1999, Section 35, but why a Section 38 process was advised, with specific reference to the inherent possibilities and level of investigation relevant to a (Phase 1) HIA with reference to the inferred heritage resource, being a subsurface restricted resource. Section 35(5) is a solution based section with specified timeframes and an emphasis on the verification of site information to guide decision making. Section 35 is directly applicable to the Erf 44500 scenario type, it states:

[5] When the responsible heritage resources authority has reasonable cause to believe that any activity or development which will destroy, damage or alter any archaeological or palaeontological site is underway, and where no application for a permit has been submitted and no heritage resources management procedure in terms of Section 38 has been followed, it may –

- (a) serve on the owner or occupier of the site or the person undertaking such development an order for the development to cease immediately for such time as specified in the order;
- (b) carry out an investigation for the purpose of obtaining information on whether or not an archaeological or palaeontological site exists and whether mitigation is necessary;
- (c) if mitigation is deemed by the heritage resources authority to be necessary, assist the person on whom the order has been served under paragraph (a) to apply for a permit as required in subsection (4); and
- (d) recover the costs of such investigation from the owner or occupier of the land on which it is believed an archaeological or palaeontological site is located or from the person proposing to undertake the development if no application for a permit is received within two weeks from the order being served.

The practicalities of Section 35(5), with reference to specific time frames for which work must be ceased and archaeological investigation to proceed, with an emphasis on initial site verification to guide decision making, but also allowing a developer to address requirements within the framework of time-cost project management budgets and direct repercussions of such a 'Cease Work Order' on legal construction contract agreements, needs to be weighed against possible outcomes of a Section 38 Heritage Impact Assessment (HIA) process.

An HIA, essentially a Phase 1 study, is limited to a background literature and database research coined with a surface field assessment aiming to identify surface sites or surface indicators of possible subsurface resources (SAHRA 2007). The NBYKB (2014) requested HIA, directly consulted with the SAHRA APM Unit, could by virtue of the inherent limitations of a

Phase 1 assessment not address or contribute to direct proactive decision making: It was known at the time of issue of the 'Cease Work Order' that no surface markers or indicators were present at the site; the inferred site was known to be subsurface restricted, with the boundaries thereof unknown.

The associated NBYKB (2014) requested non-section specific requirement for consultation does not allude a developer to heritage requirements for consultation.

1.1.1.6) Developer Compliance to the NBYKB 'Cease Work Order' Requirements

In compliance with requirements of the NBYKB 'Cease Work Order' the project proponent appointed Stephan Gaigher, G&A Heritage to compile the requested HIA. The Gaigher (2014) report confirmed surface anthropogenic sterility at the site whilst highlighting sensitivity concerns with regards to the inferred 1870's 'Black' migrant worker cemetery. Gaigher (2014) sketched probable subsurface scenarios stating that: *'The proposed development is located directly on top of a high concentration burial site with possibly hundreds of graves that will be affected'*, in which case it was proposed that development be reconsidered, or *'The second scenario would indicate that there are only a few or no grave pits in the direct vicinity of the proposed development'*, and proposing that in such case development should be allowed to proceed. Recommendations were focussed on subsurface testing, Ground Penetrating Radar (GPR) scanning, to verify the presence or absence of graves.

The Gaigher (2014) HIA report includes results of consultation, conducted by the developer. Results of consultation included a small interested group comprising 5 residents from the immediate area, all supporting the development. Results of consultation were also forwarded to the SPM, Chief Town Planner on 23 October 2014.

On 3 & 5 November 2014 the NBYKB NID and the HIA were respectively submitted to the NBYKB. Based on file size documents were forwarded via the 'Dropbox' portal and not submitted on SAHRIS. Further with reference to SAHRIS (2013a, 2013b), during the course of the HIA Pillay registered Samy's Wholesalers as an applicant on SAHRIS. A SAHRIS Case was not created by the proponent. SAHRIS CaseID 6899 – the *Samy's Wholesalers Extension* development was subsequently registered by Philip Hine (9 December 2014), SAHRA APM Unit – SAHRIS Case Officer and the Gaigher (2014) HIA uploaded on 5 January 2015.

1.1.1.7) ArchaeoMaps to follow up on a Response from SAHRA

On 19 November 2014 Pillay requested ArchaeoMaps to follow up on the SAHRA response on the HIA, in order to attempt mitigating project management schedules on site and legal agreements with construction contractors. On 20 November ArchaeoMaps forwarded digital copies of the Morris (2004) and the Gaigher (2014) documents to SAHRA, and requesting an expected date of response. Hard copies of the reports were hand delivered by Dr. Allan Grootboom (Northern Cape, Dept. Arts & Culture) to the SAHRA premises, Cape Town. On 24 November 2014 and 8 December 2014 ArchaeoMaps again followed up (e-mail correspondence: Hine) on a SAHRA HIA response, requesting an expected date of response. On 24 November 2014 Hine acknowledged receipt of project documentation on the mentioned date (20 November 2014).

E-mail correspondence by ArchaeoMaps proposed peeling, the systematic, mechanical lowering of a site to the inferred stratigraphic level as an alternative to GPR scanning as proposed by Gaigher (2014), as an effective method that have been employed with success at the Gladstone cemetery, Kimberley, to identify graves without having to impact on skeletal remains, but being more cost effective to a developer. On 11 December 2014 ArchaeoMaps forwarded an entreaty for development to proceed to the NBYKB and SAHRA (ArchaeoMaps 2014a), including cease work procedures in the event of skeletal remains identified having obtained preliminary quotes from ASAPA accredited CRM – PI's in Grave Relocation to ensure that cost to inferred work can be budgeted for. A second letter by ArchaeoMaps (2014b) notified SAHRA of the intent to proceed under conditions as stipulated in the ArchaeoMaps 2014a letter. It was requested that communication

regarding the development be forwarded to ArchaeoMaps. On 4 January 2015 ArchaeoMaps confirmed construction to proceed on 5 January 2015 by e-mail to Hine.

On 7 January 2015 SAHRA (2015a) commented on correspondence by ArchaeoMaps to SAHRA regarding the *Samy's Wholesalers Extension* development.

1.1.1.8) Construction Commencing

On 5 January 2015 work commenced on site. Results of work done are reported on in this report.

1.1.1.9) The SAHRA Interim Comment

The SAHRA Interim Comment is dated 5 January 2015. On 6 January 2015 Morris visited the site and informed ArchaeoMaps that a SAHRA Comment (SAHRA 2015b) has been issued, including comment specific details therein. ArchaeoMaps responded that the SAHRA Comment was not communicated to ArchaeoMaps. Morris must have left the site at approximately 11:45, e-mail properties indicate the forwarded SAHRA Comment from Hine to ArchaeoMaps at approximately 12:30, 6 January 2015. After Morris left Pillay, unaware of the Morris site visit, returned to the site with the said Comment received by e-mail.

The SAHRA Comment (2015b) sketches the basics of the development: Sensitivity of the location of the warehouse with reference to the informal cemetery, 1870's, stating that the extent of the cemetery is not well understood due to the absence of surface markers.

The SAHRA Comment (SAHRA 2015b) then states: *'It is understood that construction work has commenced for the proposed warehouse and that the Northern Cape Provincial Heritage Authority (Ngwao-Boswa) issued a cease works order on the construction activities pending the completion and results of a Heritage Impact Assessment. A Heritage Impact Assessment was undertaken by G&A Heritage Management Consultants. It should be noted that the Heritage Assessment was e-mailed to SAHRA after a cease works order was issued on the developer. The cease works order is dated 16 October 2014, whereas approval for the development was granted on 6 November by the Sol Plaatje Municipality.'* The 1st section of this comment is confusing – The HIA was commissioned in compliance with requirements as stipulated in the NBYKB 'Cease Work Order'; it is therefore only logical that the HIA was compiled after the 'Cease Work Order' was issued, and subsequently submitted to SAHRA. Of note here is the statement that the HIA was e-mailed to SAHRA: HIA documentation was submitted to SAHRA by Gaigher (albeit not on SAHRIS), with e-mail correspondence between Gaigher and Pillay indicating unsuccessful attempts by Gaigher to obtain a SAHRA response within the 14 day period as stipulated in the 'Cease Work Order'. The statement points towards uncertainty by SAHRA on the contents and stipulations of the 'Cease Work Order', which may be perceived as poor communication between the NBYKB and SAHRA. The last section of the statement is fatally flawed: *'The cease works order is dated 16 October 2014, whereas approval for development was granted on 6 November 2014, by the Sol Plaatje Municipality.'* ArchaeoMaps communication with SAHRA made pertinent mention of the 1st Authorization, applicable at the time of commencement of work and the 3rd Authorization, with reference to time frames contained therein at the time of ArchaeoMaps consultation with SAHRA. The SAHRA dismissal of ArchaeoMaps consultation perhaps serves to explain. For purposes of this report; a note on the relevance of consultation directly with a developer, rather than the seeming SAHRA employed management strategy of running a 'parallel investigation'. The statement however, officially tainting the development as illegal from the beginning.

Listed reasons for SAHRA's rejection of the HIA includes comments such as that the Stone Age and Iron Age sequences described are irrelevant. A general pre-feasibility study being a basic requirement for a HIA or Phase 1 assessment (SAHRA 2007), pointing to the relevance of a Phase 1 assessment request in the event of an inferred subsurface resource. It needs to be noted that the very site in question, a 'Black' migrant worker cemetery dating to the 1870's, can be interpreted differently: 'Black' immediately implying 'Iron Age', 1870's – temporally Colonial Period, with the LIA *en large* being of

Colonial Period times. SAHRA (2015b) states: *'This is because the proposed development is located in a well developed area'*, denying the very culturally complex makeup of developed or urban areas across the South African landscape, principles of stratigraphic layering and temporal re-use of areas by later groups, cultural layering often being the very premise of archaeological sites and the research value therein. Concerns address the variable case scenarios proposed by Gaigher (2014), the possibility of *'hundreds of graves'* at the study site but including the possibility that the site may have *'no significant resources'*, described by SAHRA simply as *'contradictory'*. The SAHRA Comment did not comment on recommendations by Gaigher for subsurface testing, for purposes of site verification. A 2nd HIA was requested: *'It is therefore required that a new heritage report should be commissioned that would focus on the impact of the warehouse on the historical cemetery. The significance of the area should be properly assessed.'* The statement can be interpreted as *'conviction'* of the inferred presence of graves, implying that site data may well be available. In the opinion of ArchaeoMaps it is best to ensure that heritage site significance ratings are not ascribed to hypotheses, but to actual sites: The general (or inferred) sensitivity of the area in question being the very reason for the NBYKB *'Cease Work Order'*. It is questioned to what level SAHRA expected their *'informed decision'* based on a 2nd HIA to contribute to decision making on whether or not development would impact on an actual site and therefore whether development would be able to proceed or not, and if so, under what conditions.

The SAHRA (2015a) Comment included a cease work instruction.

1.1.1.10) Appointment of Engelsman, Magabane Incorporated (EIM)

Upon explanation of the inherent possibilities of a 2nd HIA for purposes of development specific decision making by SAHRA and a SAHRA *'Cease Work Order'* issued same date (SAHRA 2015c), Pillay decided to call on legal assistance. A meeting with Riaan Bode, Engelsman Magabane Incorporated (EMI) ensued, 6 January 2015. A telephonic request by Bode with reference to the 2nd requested HIA versus testing proved of little impact; Hine insisted on a 2nd HIA. Bode agreed to forward a letter (7 January 2015) stating that excavation impact had been ceased at a level 30cm below the original surface. The letter however stated: *'All equipment that could possibly be used in relation to excavation and construction was in the process of being removed during the course of the day.'* This statement was in direct contradiction with communication between Pillay and Bode; Pillay having emphasized the fact that not all equipment could be removed: Infrastructure concerns had to be addressed and the site had to be sealed. A copy of the EMI letter was forwarded by Bode to ArchaeoMaps on 8 January 2015.

[On 6 January 2015, at the EMI office, prior to the meeting with Bode Pillay received, in the presence of ArchaeoMaps, a call from Scheermeyer, requesting to speak to Timothy. Realizing that it was the wrong number the call was ended without taking the opportunity to communicate with Pillay.]

On 9 October Pillay (via ArchaeoMaps) instructed Bode to forward a letter to SAHRA requesting site information; including Provincial Heritage Site (PHS) status or process documentation, possible research applications or proposals on the property, additional CRM documentation that may not be submitted on SAHRIS etc. Follow-up requests by ArchaeoMaps to confirm correspondence having been sent failed. Bode responded telephonically, 23 January 2015, that the letter was never sent to SAHRA. Reference to Hine's telephonic statement (8 January 2015) to ArchaeoMaps that SAHRA have not approved of an RDP scan or material used to seal the site remain vague; confirmed telephonically by Bode that he had received written communication with regards thereto from SAHRA, but not forwarded for ArchaeoMaps' attention, despite requests. Bode commented on the fact that he had submitted the Department of Labour (DoL) cease work instruction to Hine. Pillay terminated the services of EMI on 23 January 2015.

[A letter requesting access to site information in SAHRA records was forwarded directly by ArchaeoMaps for the attention of Dumisani Sibayi, SAHRA Executive Officer, 26 January 2015. Information was requested by 2 February 2015. No response was received by SAHRA.]

1.1.1.11) SAHRA 'Cease Work Order' – 6 January 2015

The SAHRA 'Cease Work Order' (SAHRA 2015c), dated 5 January 2015, faxed to the SAPS and delivered to Pillay on 6 January 2016 refers. The 'Cease Work Order' states: 'It has come to the attention of... SAHRA... that the activity on Erf 44500... is in contravention of Section 36(3) of the National Heritage Resources Act 25 of 1999. PLEASE TAKE FURTHER NOTICE that you are hereby served with an Order in terms of Section 50(10) of the National Heritage Resources Act for any activity on Erf 44500 at the corner of Quinn and Lawrence Street, Kimberley, Northern Cape to cease immediately.' The 'Cease Work Order' reiterates the SAHRA (2015a) HIA request and comments on the fact that the Gaigher (2014) study did not meet SAHRA requirements. The 'Cease Work Order' states: 'No construction activities will be allowed until such time that SAHRA is satisfied with the new Heritage Assessment and formal communication is provided regarding the desirability of the proposed development and compliance with relevant provisions of the National Heritage Resources Act 25 of 1999.' Concerns with the SAHRA 'Cease Work Order': The vagueness regarding how 'it has come to the attention'? – Through direct notification by ArchaeoMaps? The issue of decision making with reference to the possibilities inherent in a Phase 1 HIA with respect to an inferred subsurface resource has already been addressed.

The 'Cease Work Order' was issued in terms of Section 50(10). ArchaeoMaps (ArchaeoMaps 2014a, 2014b) indicated to SAHRA that Section 50 will be observed. The NHRA 1999 Section 50 states:

- [10] A heritage inspector may, if there is reason to believe that any work is being done or any action is being taken in contravention of this Act or the conditions of a permit issued in terms of this Act, order the immediate cessation of such work or action pending any further order from the responsible heritage resources authority.

Preceding subsections of the NHRA 1999, Section 50, deals specifically with the appointment of heritage inspectors by SAHRA or a PHRA. No visitor to the site wore or produced a card. Heritage professionals visiting the site were requested in what capacity they did so: Specialists from both the McGregor Museum and the Sol Plaatje University indicated that they weren't visiting in the capacity of heritage site inspectors. The NHRA 1999 Section 50(7) makes provision for appointment of heritage site inspectors in writing only. An appointed heritage site inspector may thus not be identifiable by a project team. However, no person approached or introduced themselves in such capacity. The SAPS stated that they were there to deliver the SAHRA 'Cease Work Order' and not in the capacity of heritage site inspectors. They were however shown the site. The question thus remains who the heritage site inspector was? – And if the 'Cease Work Order' issued in terms of Section 50(10) was rightfully issued by SAHRA directly.

The SAHRA 'Cease Work Order' issued in terms of the NHRA 1999 Section 50(10), with the only timeframe relevant thereto the '...pending any further order', cautions again against nondescript time frames for decision making and the question is again raised why the SAHRA 'Cease Work Order' was not issued in terms of the NHRA 1999 Section 35(5), with its time specific reference and solution based investigative procedures for verification of a subsurface resource.

[Note: Erroneous e-mail contact details on the SAHRA 'Cease Work Order'.]

1.1.1.12) Department of Labour 'Cease Work Instruction' – 8 January 2015

On 8 January 2015 Pillay was issued with a cease work instruction by the Department of Labour (DoL). Makaco Khoele (DoL, Northern Cape) requested that Annexure 2 be completed and submitted with a Risk Management Plan to meet legislative requirements of the DoL. Khoele provided a brief 'checklist' instruction of DoL minimum requirements for Risk Management Plans to ensure compliance standards will be met, together with instructions and a user helpline number to assist in accessing relevant documentation from the DoL's website. Khoele commented on the urgency of site fencing for construction purposes, heritage concerns relating to fencing was communicated. Upon request Khoele stated that he was notified by 'the media' of the development, immediately prior to the visit. The issue was left at that – 'the media' in the case inferred to have been the Volksblad. A preliminary Annexure 2, primarily highlighting on-site heritage concerns was submitted to the DoL on 9 January 2015.

On 9 & 12 January 2015 the project proponent met with Noshtac, occupational health and safety specialists. Appointment of Noshtac is pending a 'go-ahead' on the development, effectively a SAHRA response. The risk management plan will address the fencing concern on site, either through a request on lee-way or an extended site construction fence, both options with their pro's and con's; this to address issues of small site size versus the size of construction vehicles (Pers. Comm.: Mike Combrink, Noshtac).

1.1.1.13) The GPR Scan

The GPR scan was conducted on 23 & 24 January 2015. A specialist GPR scan report is submitted as part of the heritage documentation for the project and is briefly commented on in this report.

On 23 January 2015, approximately 09:00, a white vehicle [Registration Number: CG55HY GP(?)] drove right onto site, inferred to have been for cellphone photographic purposes (and impacting in part on survey markers). Incidences of sort are problematic; unless as appointed heritage site inspector, in which case open access for photographic purposes could have been requested issues with regards to intellectual property rights may be raised. Unauthorized capture of such images together with erroneous interpretation and distribution can be problematic.

In a telephonic conversation 8 January 2015 Hine Stated to ArchaeoMaps that SAHRA has not approved a GPR scan and adding thereto that SAHRA did not approve of the seal material.

1.1.1.14) Heritage Consultation

Heritage consultation is reported on in the report.

[A report was forwarded to the NBYKB and SAHRA reporting on vandalism at the site (ArchaeoMaps 2014c)].

2 - Archaeological and Cultural Heritage Impact Assessment

2.1 – General Information

2.1.1) Assessor Accreditation

Karen van Ryneveld (ArchaeoMaps):

- Qualification: MSc Archaeology (2003) WITS University, Johannesburg / Certificate GIS (2007) NMMU University, Port Elizabeth.
- Accreditation: Association of Southern African Professional Archaeologists (ASAPA) accredited Cultural Resources Management (CRM) practitioner [member nr – 163]
 1. 2004 – Association of Southern African Professional Archaeologists (ASAPA) – Professional Member.
 2. 2005 – ASAPA CRM Section: Accreditation – Field Director (Stone Age, Iron Age, Colonial Period).
 3. 2010 – ASAPA CRM Section: Accreditation – Principle Investigator (Stone Age).

Karen van Ryneveld is a SAHRA / AMAFA / EC PHRA / HWC listed CRM archaeologist.

Karen has been involved in CRM archaeology since 2003 and has been the author (including selected co-authored reports) of more than 300 Phase 1 AIA studies. Phase 1 AIA work is centered in South Africa, focusing on the Northern and Eastern Cape provinces and the Free State. She has also conducted Phase 1 work in Botswana (2006/2007). In 2007 she started ArchaeoMaps, an independent archaeological and heritage consultancy. In 2010 she was awarded ASAPA CRM Principle Investigator (PI) status based on large scale Phase 2 Stone Age mitigation work (De Beers Consolidated Mines – Rooipoort, Northern Cape – 2008/2009) and has also been involved in a number of other Phase 2 projects including Stone Age, Shell Middens, Grave / Cemetery projects and Iron Age sites.

In addition to CRM archaeology she has been involved in research, including the international collaborations at Maloney's Kloof and Grootkloof, Ghaap plateau, Northern Cape (2005/2006). Archaeological compliance experience includes her position as Head of the Archaeology, Palaeontology and Meteorites (APM) Unit at AMAFA aKwa-Zulu Natali (2004).

2.1.2) Site Significance Assessment and Ratings

Archaeological and cultural heritage site significance assessment and associated mitigation recommendations were done according to the system prescribed by SAHRA (2007).

SAHRA Archaeological and Cultural Heritage Site Significance Assessment			
Site Significance	Field Rating	Grade	Recommended Mitigation
High Significance	National Significance	Grade I	Site conservation / Site development
High Significance	Provincial Significance	Grade II	Site conservation / Site development
High Significance	Local Significance	Grade III-A	Site conservation or extensive mitigation prior to development / destruction
High Significance	Local Significance	Grade III-B	Site conservation or extensive mitigation prior to development / destruction
High / Medium Significance	Generally Protected A	Grade IV-A	Site conservation or mitigation prior to development / destruction
Medium Significance	Generally Protected B	Grade IV-B	Site conservation or mitigation / test excavation / systematic sampling / monitoring prior to or during development / destruction
Low Significance	Generally Protected C	Grade IV-C	On-site sampling, monitoring or no archaeological mitigation required prior to or during development / destruction

Table 1: SAHRA archaeological and cultural heritage site significance assessment ratings and associated mitigation recommendations

2.2 - Pre-feasibility Assessment

2.2.1) Pre-feasibility Summary

Based on a basic introductory literature assessment of South African archaeology (See Appendices A and B) and background heritage database research, the probability of archaeological and cultural heritage sites situated within or in direct proximity to the *Samy's Wholesalers Extension* development, Erf 44500, Kimberley, Northern Cape, can briefly be described as:

Archaeological and Basic Cultural Probability Assessment – <i>Samy's Wholesalers Extension</i> development, Erf 44500, Kimberley, Northern Cape			
Primary Type / Period	Sub-Period	Sub-Period Type Site	Probability
EARLY HOMININ / HOMINID	-	-	Low
	Graves / Human remains: High scientific significance		
STONE AGE	Earlier Stone Age (ESA)		None-Low
	Middle Stone Age (MSA)		Low
	Later Stone Age (LSA)		Low
		Rock Art	Low
		Shell Middens	None
	Graves / Human remains: ESA & MSA – High scientific significance; LSA – High scientific & social significance		
IRON AGE	Early Iron Age (EIA)		None
	Middle Iron Age (MIA)		None
	Later Iron Age (LIA)		High
	Graves & Human remains: EIA – High scientific & medium social significance; MIA & LIA: High scientific & social significance		
COLONIAL PERIOD	Colonial Period		High
		LSA – Colonial Period Contact	Medium (pastoralist)
		LIA – Colonial Period Contact	High
		Industrial Revolution	High
		Apartheid & Struggle	Medium
	Graves / Human Remains: Medium-high scientific & high social significance		

Table 2: Archaeological and basic cultural probability assessment

2.2.2) Databases, Site Information and Hypotheses

2.2.2.1) The SAHRA 2009 MPD and SAHRIS

A number of archaeological Cultural Resources Management (CRM) reports are recorded in the SAHRA 2009 Mapping Project Database (MPD), situated within an approximate 30km radius from the *Samy's Wholesalers Extension*, Erf 44500, Kimberley, study site. Archaeological CRM studies limited to the Northern Cape can be non-exclusively, listed as:

- Beaumont, P.B. (McGregor Museum). 2005. *Archaeological Impact Assessment of Portion 37, a Portion of Portion 27 (Boland) of the Farm Zoutpansfontein No 34, Kimberley District, Northern Cape.*
- Beaumont, P.B. (McGregor Museum). 2007. *Phase 1 Heritage Impact Assessment Report on Parts of Portion 2 and the Remainder of the Farm Holsdam 229 near Barkley-West, Frances Baard District Municipality, Northern Cape Province.*
- Beaumont, P.B. (McGregor Museum). 2008. *Phase 1 Heritage Impact Assessment Report on the Proposed Northgate Housing Development on Portions of the original Farm Roode Pan 70, near Kimberley in the Sol Plaatje Municipality of the Northern Cape Province.*
- Dreyer, C. (Private). 2003. *Archaeological and Historical Investigation of the Proposed Pipeline Installation at Hanover, Northern Cape.*

- Dreyer, C. (Private). 2006. *First Phase Archaeological and Cultural Heritage Assessment of the Proposed Developments at the Big Hole, Kimberley, Northern Cape.*
- Dreyer, C. (Private). 2008. *Archaeological and Culture Historical Assessment of the Proposed Residential Developments at Kimberley, Northern Cape.*
- Morris, D. (McGregor Museum). 2001. *Report on Historical Rubbish Midden at Kamfersdam.*
- Morris, D. (McGregor Museum). 2003. *Archaeological Survey of the Farm Koodoosberg No 141.*
- Morris, D. (McGregor Museum). 2004. *Skeletons found at 78 Transvaal Road, Kimberley, report to SAHRA – Permit 80/04/04/005/51.*
- Morris, D. (McGregor Museum). 2005a. *Site Visit to Inspect an Area of Proposed Debris Washing along Kenilworth Road on Erf 14741, in the Magisterial District of Kimberley.*
- Morris, D. (McGregor Museum). 2005b. *Phase 1 Archaeological Impact Assessment for De Beers Consolidated Mines Ltd (Contract 0616-AC-244-05) to Evaluate Heritage Resources on Properties as Indicated.*
- Morris, D. (McGregor Museum). 2005c. *Phase 1 Archaeological Impact Assessment of the so-called 'Kemo-Dump' (National Site Number 2824DB039) on Remainder of Erf 5024, Erf 6376 and Erf 5058, Vooruitzicht 81, Kimberley, Northern Cape.*
- Morris, D. (McGregor Museum). 2005d. *Site Visit to Inspect Cultural Material on Mine Debris Dumps Adjacent to the Kimberley Mine at the Site of the Proposed Hotel.*
- Morris, D. (McGregor Museum). 2006. *Report on a Phase 1 Archaeological Impact Assessment of a Proposed Clay Quarry at Roodepan 70, Kimberley, Northern Cape (30/5/1/3/3/2/1/358EM).*
- Nel, J. (Archaic Heritage). 2008. *Final Report: Heritage Resources Scoping Survey and Preliminary Assessment of Transnet Freight Line EIA, Eastern Cape and Northern Cape.*
- Van Ryneveld, K. (McGregor Museum). 2006. *Phase 1 Archaeological Impact Assessment – Erf 49, Erf 687 and Commonage Erf 687, Barkley-West District, Northern Cape, South Africa.*
- Van Ryneveld, K. (National Museum Bloemfontein). 2007. *Phase 1 Archaeological Impact Assessment – Portion of the Farm Platfontein 68, Kimberley District, Northern Cape, South Africa.*

Post compilation of the SAHRA 2009 MPD additional SAHRIS cases, situated within an approximate 15km radius from the *Samy's Wholesalers Extension* study site indicates increasing development in the more immediate vicinity. However, many of these pertain to mining / prospecting right applications for which archaeological CRM reports are not as yet available, including SAHRIS Case ID's 1084, 1375, 1790, 2504, 3203, 4617, 5766 and 6088. Four (4) SAHRIS cases include archaeological CRM reports, with information contained therein serving to better describe the greater receiving archaeological and cultural landscape of the *Samy's Wholesalers Extension* study site. Reports are listed as:

- Becker, E. (Envass). 2011. *Archaeological Impact Assessment Technical Report Prepared for !Xun and Khwe – !Xun and Khwe Solar Farm.*
- Becker, E. (Hatch). 2013. *Transnet Capital Projects. Ngqura 16 MTPA Manganese Rail. Phase 1 Heritage Impact Assessment – Rail, Kimberley to De Aar.*
- Morris, D. (McGregor Museum). 2014. *Proposed Boundary Solar Energy Facility on the Farm Karreeboom 1716, East of Kimberley, in the Tokologo Local Municipality, Free State: Heritage Impact Assessment.*
- Van Ryneveld, K. (ArchaeoMaps). 2012. *Phase 1 Archaeological Impact Assessment - !Xun and Khwe Solar Project, Platfontein 68, Sol Plaatje Municipality, Northern Cape, South Africa.*
- Van Vollenhoven, A.C. (Archaeoethos). 2014. *Heritage Scoping Report Related to the Eskom Kimberley's Strengthening Phase 4 Project between the Boundary and Ulco Substations in the Northern Cape.*

One (1) previous archaeological CRM study pertains directly to the *Samy's Wholesalers Extension* study site, referenced as:

- Gagher, S. (G&A Heritage). 2014. *Heritage Impact Assessment Report for the Proposed Expansion of the Samy's Wholesalers Warehouse, Kimberley – Northern Cape Province.*

2.2.2.2) General Discussion

Archaeological CRM reported on Stone Age records are ample and representative of the major temporal Industrial phases: Earlier Stone Age (ESA) deposits were recorded on from the greater Barkley-West (Beaumont 2007; Van Ryneveld 2006) and Koodoosberg areas (Morris 2003). Morris (2014) reported on a Fauresmith occurrence, often interpreted as a 1st transitional phase or technology. Middle Stone Age (MSA) reports are plentiful, reported on from the Kimberley area (Becker 2011; Morris 2006; Morris & Kaplan 2001; Van Ryneveld 2007, 2012), but to as far afield as Barkley-West (Van Ryneveld 2006) and the Free State (Morris 2014). Later Stone Age (LSA) artefact records, often occurring in association with the MSA, imply an equally wide distribution range and including records of both macrolithic and microlithic technologies (Beaumont 2007; Becker 2011; Morris 2003; Van Ryneveld 2007, 2012). LSA lithic deposits found in direct association with rock engravings serves as testimony to the more varied LSA cultural record (Morris 2003). The archaeological CRM Stone Age record, despite wide distribution and temporal and Industrial representation hardly does justice to the significance thereof: Ongoing research at Canteen Koppie, near Barkley-West, a Stone Age site with significant, fairly continuous stratigraphic sequencing spanning the ESA – LSA is increasingly drawing palaeolithic research interest to the area (Chazan *et. al.* 2013), while reanalysis of the 1929 discovered Canteen Koppie (CK) skull has confirmed the specimen as of KhoeSan physical type dating to the Holocene (Smith *et. al.* 2012). The Wildebeest Kuil Rock Art Centre, a declared Provincial Heritage Site (PHS) situated just outside Kimberley focusses on both research and educational tourism. Research centers on the Stone Age and Rock Art record at the site, an open air museum (www.wildebeestkuil.itgo.com), but include Colonial Period aspects on the property (Weiss 2009).

The Iron Age record of the greater area, primarily a Later Iron Age (LIA) history is hardly represented in archaeological CRM reports. LIA Sotho-Tswana and Nguni people settled the Northern Cape from the rough 1600's onwards with Dithakong – 'The Place of Ruins', being the major Thlaping (Tswana) polity, but with the polity often moving location (Huffman 2007; Morris 1990), though generally sited roughly 200km north-west of Kimberley. However, instability of Mzilikazi's *Difaqane* affected the greater Kimberley area from the 1820's onwards; displaced Tlokwa, Fokeng, Hlakwa and Phuteng increasingly settled in the area (De Jong 2010), thereby setting the stage for the emerging mixed, displaced and *en large* expatriate Black community that was soon to characterize the cultural landscape of Kimberley.

Colonial Period archaeological CRM records reflect a faceted history, including historical buildings and structure remains (Becker 2011, 2013; Morris 2014; Nel 2008; Van Ryneveld 2012), a number of middens (Morris 2001, 2005b, 2005c, 2005d; Morris & Kaplan 2001), early mining village remains (Morris 2005b) and associated industrial infrastructural remnants (Becker 2013). Remains are often associated with records of cemeteries and grave sites of cross cultural tradition and including amongst them a Colonial Period grave site reported on by Becker (2013), the Du Toitspan cemetery (Morris 2005b), Phase 2 mitigation (excavation) records of previously unknown graves at the Gladstone cemetery (Morris *et. al.* 2004), recently mitigated graves from the Greenpoint suburb of Kimberley (SAHRIS CaseID 5153) and with more direct reference to the *Samy's Wholesalers Extension* study site, 4 graves mitigated from 87 Transvaal Road (Morris 2004) and 9 from Lawrence Street during a 2012 Neotel development, with the Phase 2 mitigation report pending (Pers. Comm.: Frank Lightfoot, Neotel).

* * *

In 1866 the 15 year old Erasmus Jacobs discovered a '*bright pebble*' (diamond) on his fathers' farm, De Kalk, near Kimberley. Passed on to their neighbor Schalk van Niekerk, the diamond was traded through Dr. Guyborn Atherstone and became known as the 21.25 carat '*Eureka*'. Merely 3 years later (1869) Schalk van Niekerk sold another diamond, obtained from a Griqua, for £11,200 – a diamond that was to become internationally known as the '*Star of Africa*'. The same year witnessed the discovery of an 83.5 carat diamond on the farm Vooruitzicht, then owned by the brothers Diederick Arnoldus and Johannes Nicolaas de Beer (Giliomee & Mbenga 2007). Between 1869 and 1871 surface outcrops of four diamondiferous pipes were located, all in fair proximity to the Vaal River, on land then held under Orange Free State titles by Dutch speaking farmers (Mabin 1986). The '*Diamond Rush*' that followed was to forever change the cultural landscape of the area:

During the latter part of the 1860's / early 1870's only Cape Town, Port Elizabeth and Kimberley³ had populations of over 10,000 (Mitchell 2002). An 1878 census recorded Kimberley's population as 14,169 including Europeans (6,574) and non-Europeans (7,595) (Diamond News 1879). During the 1880's Kimberley's population had grown to over 50,000 (Gillomee & Mbenga 2007).

Dispute over ownership of the diamond fields immediately followed the discovery of diamonds; involving the Transvaal and Orange Free State Boer Republics, Griqua, Korana and Thlaping communities and the Cape Colonial Government. Through the Keate Arbitration of 1871 the diamond fields were awarded to the Griqua, directly to the Chief of the Griqua, Nicolaas Waterboer; thereby effectively proclaimed British territory under the name Griqualand-West. In 1879 Griqualand-West was annexed to the Cape Colony (De Jong 2010).

The population of Kimberley at the time was mixed, comprising Cape Colonists, mainly English and Dutch speaking, of varying racial groups and socio-economic backgrounds, as well as many African wage laborers (Mabin 1986). The complexity of only indigenous Africans in Kimberley was at the time further described by Rev. Tyamzashe (Christian Express newspaper, 1874, after Gaigher 2014): *'From the missionary point of view, it is not easy to deal with such a mixture of tribes as we have on the diamond fields. There are San, Khoikhoi, Griquas, Bathlaping, Damaras, Barolong, Barutse..., Bapedi, Baganana, Basutu, Maswaza, Matanga, Matabele, Mabaca, Mampondo, Mamfengu, Batembu, Maxhosa etc. Many of these (people) can hardly understand each other, and in many cases they have to converse through the medium of either Dutch, Sesotho or Xhosa. Those coming from far up in the interior such as the Bapedi come with the sole purpose of securing guns. Some of them therefor resolve to stay no longer here than is necessary to get some £6-£7 for the gun. Hence you will see hundreds of them leaving the fields, and as many arriving from the north almost every day.'*

During the late 1860's to early 1870's claims were primarily worked by independent claimholders, providing for a fairly fragmented system of production, nonetheless accounting for in excess of £400,000 in diamond exports in 1871. The following year diamond production surpassed £1.6 million, opening up greater possibilities of capital investment. Resultantly the early 1870's saw a number of small companies forming, but with restrictions on racial claim ownership, in turn leading to the unsuccessful 'Black Flag Revolt' of 1875. Following a radical drop in diamond prices in 1876 diamond merchants were able to raise funds to purchase more claims – a time which marked the beginning of company formation and industrialized mining, directly associated with large scale infrastructural (primarily transport) development in South Africa and further north. To give a simple example of development in the industrialized mining sector at the time: 16 steam engines employed on Kimberley's mines in 1877 were increased to 306 in 1881 (Mabin 1986). As early as 1872 work also commenced on connecting Kimberley by rail to cities along the Cape Colony's coastline, then under management of the Cape Government Railways, with the line between Cape Town and Kimberley completed in 1885 (en.wikipedia.org/wiki/User: Firefishy/SA_Rail/History).

Between 1877 and 1885 British Imperial troops conquered many a Xhosa, Zulu, Pedi and Tswana polity, described by Mabin (1986) as resulting in a *'... "willingness" by large numbers of Africans to be recruited into laboring jobs at minimal pay.'*

An emphasis on company formation, increasing numbers of 'cheap' wage laborers (associated also with theft on the mines) and the 'boom-and-bust' of the share mania led to ownership of the mines being in the hands of less than 12 companies by 1883. Depression marked the period 1883 to 1885 – share price dropped from 30s in 1882 to below 23s in 1883, with a direct effect on capital – labor relationships: Unemployment numbers rose drastically and employers took advantage of radically reduced wages, employing minimal employees, with tighter control taken over both White and Black workers. Increasing racial labor division, directly associated with remuneration became prominent, characterized by higher wages reserved for White employees than their Black counterparts. This resulted in an adverse statistic with reference to job losses: From employment of 3,900 laborers on the Kimberley mines in 1881 to a mere 1,210 in 1884, with a lesser percentage of Black job losses than White job losses, a direct result of lower Black wages. Company restructuring to reduce production cost became progressively imperative. 1883 Saw the introduction of a system of formally searching mine workers after each

³ Originally called 'New Rush', renamed (and proclaimed) as Kimberley in 1873, after the Earl of Kimberley, British Secretary of State for the Colony. Kimberley and the nearby town of Beaconsfield were 2 separate towns, only to be merged in 1912 as Kimberley.

shift with working hours strictly monitored. Companies increasingly focused on formalization of housing to further monitor their work force: Compound housing, townships and workers villages were increasingly supported and later imposed by company policy, with aspects thereof successively formalized by law (Mabin 1986).

In 1888 Cecil John Rhodes became chairman of the newly founded De Beers Diamond Mining Company (DBDMC), and soon thereafter focused his attention on the then French owned portion of the mine, the *Compagne Francaise des Mines de Diamants du Cap de Bonne Esperance*. An agreement between Rhodes and Barney Bernato ensured the French mine in ownership of Bernato in 1889, with a significant shareholding by Rhodes. Shares in the mine quickly rose from £14-£49, but overproduction soon resulted in the market hitting an all-time low upon which Rhodes proposed to merge the DBDMC with the Kimberley Central Diamond Mining Company (KCDMC), forming 1 consolidated company, De Beers Consolidated Mines. A shareholder appeal to the merger was granted by court, resulting in KCDMC being liquidated and bought by De Beers Consolidated Mines. Soon thereafter De Beers Consolidated Mines also purchased the Bultfontein and Du Toitspan mines, thereby establishing a monopoly over the Kimberley mines that were to last for decades to come (en.wikipedia.org/wiki/Barney_Bernato).

Later Colonial Period history of Kimberley includes the Siege of Kimberley in 1899, during the Anglo-Boer War (1899-1902). Apartheid and Struggle histories are well awarded on the town, but these well post-dating timeframes applicable to the *Samy's Wholesalers Extension*, Erf 44500, study site (en.wikipedia.org/wiki/Kimberley,_Northern_Cape).

2.2.2.3) Hypothesis 1 – Erf 44500 as Part of the ‘Black’ Migrant Worker Cemetery (1870’s / 1879)

The current hypothesis, that Erf 44500 forms part of an early ‘Black’ migrant worker cemetery, dating to the 1870’s, and having become defunct circa. 1879, was 1st postulated by Morris (2004) after the discovery of 4 graves at 78 Transvaal Road, in the parking lot of the Samy’s Wholesalers depot. At the time Morris proposed that the area be conserved and declared as a Provincial Heritage Site (PHS). Morris’ hypothesis was supported by more informal accounts of skeletal remains having been discovered / present at the Diamantveld Primary School property, situated between the Pioneer Cemetery (Beit Street) and Quinn Street, with further oral reports on skeletal remains from the general Transvaal Road area.

Archival evidence, a March 29, 1879 Diamond News newspaper report (DN 1879) reports on cemeteries in the area:

Diamond News newspaper, March 29, 1879 – ‘Report on the Sanitary Condition of Kimberley – Burial Grounds’

‘Within the Municipality there are three burial grounds: -

- 1) *The cemetery, which is used for Europeans and coloured people only. This spot about 5 acres in extent, is situated on the Transvaal Road below the goal. Neatly surrounded by a wall, the regularity with which it is laid out, the order everywhere exhibited, and the perfect state in which the grounds are kept, reflect great credit on the Committee to whose management it is entrusted. We observe that the graves were dug to a fair depth, and that sufficient space was allowed between each.*
- 2) *The burial ground for natives – This is situated in close proximity to the European cemetery, a very different state of matters, however, exists here. The digging of these graves is entrusted to black convicts and native police (who by the way employ the Sabbath for the purpose) without any white supervision, so the near residents informed us, consequently little or no uniformity of arrangement can be expected or is it to be found.*

The graves seen by us ‘ready made’, awaiting their dead, were of a depth totally inadequate to prevent the effects of decomposition becoming apparent, even to passers by. Those we examined were extremely shallow, varying in depth from two feet to three feet four inches, and were only from six to eight inches apart. A gentleman residing near told us he had on several occasions, on measuring, found the bodies within six inches from the surface and had also observed them lying exposed to the surface for two to three hours awaiting burial.

As these bodies are buried without coffins, and as the soil in that neighborhood is of a loose nature,

decomposition rapidly sets in. Heavy rains had just fallen previous to our visit, and the effluvia from the graves was simply horrible. In some places funnels had even been established by the water to the putrifying mass beneath.

Six hundred and four natives were interred here during the past year, and we consider it a matter for which to be thankful that the prevailing winds come from a quarter that waft these pernicious smells from the camp, otherwise with this glaring neglect of all sanitary precautions, dire consequences must ere this have ensued.

- 3) *The remaining burial ground situated midway between Kimberley and Old de Beers, on the left of the road has been in disuse for several years; unprotected from desecration by either wall or ditch, trampled over by pigs and cattle, it is a crying disgrace to the civilized portion of this community.*

The recommendations we have to make on this subject relate only to the Kafir burial ground, and we would suggest –

- 1) *That the graves be dug in regular order.*
- 2) *That they be dug to a depth of not less than five feet.*
- 3) *That a space of at least two feet be allowed between each.*
- 4) *That the area allotted for this native burial ground be either enclosed by a wall or encompassed by a bank and ditch.*
- 5) *That the residents in the neighborhood be cautioned against drinking water from the wells in the near locality.*
- 6) *That the bodies be buried at once on being brought to the graveyard.*
- 7) *And lastly, That no more internments take place at the present site, but that a new locality at a further distance from the Township be at once chosen as a burial ground for the native population.'*

The initial discovery of graves at 78 Transvaal Road, coined with archival evidence led Morris (2004) to postulate the hypothesis that the Erf 44500 area and surrounds form part of the 'Black' migrant worker cemetery referred to in the DN 1879 report. With reference to the 78 Transvaal Road graves Morris (2004) states: *'The four graves lay in a regular row and, together, are highly suggestive that this site is part of a larger burial ground. ... geographically, it corresponds with the locality indicated in the 1879 report, and the graves found are all unexpectedly shallow.'* Morris (2004) continues: *'Subject to further findings, it could be that there are up to four to five thousand burials in this relatively informal 1870's African pioneers burial ground.'* The report highlights the problematic concern that the boundary of the said cemetery is unknown, but addresses, at least in part, adherence to the 7th recommendation regarding the 'Black' cemetery; Morris (2004) states: *'Burials subsequently took place at a spot which in 1883 was officially proclaimed as the new Gladstone cemetery.'*

The Morris (2004) report contains additional useful information: With reference to stratigraphy it can be inferred that loose Hutton sand overlies a 'consolidated calcified sand / calcrete' member situated roughly 60-65cm below the surface and that graves were dug into this member, at shallow depths, roughly 12cm in the case of Graves B and D, 20cm in the case of Grave C and with the deepest grave being grave A, dug approximately 35cm into the calcified member.

Additional unmarked graves were discovered along Lawrence Street during a Neotel development. Nine (9) graves were exhumed during the 2012 Phase 2 mitigation. Two graves, including a 'family grave' comprising 2/3 individuals and 1 additional grave containing remains of a single individual were found in direct proximity, on the sidewalk of Erf 44500. An additional 5/6 graves were uncovered further north along Lawrence Street. No graves were identified along the Quinn Street section of the Neotel development. The Phase 2 mitigation report on the project is at present pending (Pers. Comm.: Frank Lightfoot, Neotel & David Morris, McGregor Museum).

Work by Morris in 2004 attracted noticeable commercial media attention with his hypothesis receiving wide recognition, inferred to have only been reinforced by the further skeletal discoveries in 2012, to a level where the hypothesis seems to have almost become 'fact': A Volksblad (5 January 2015) article reporting on the *Samy's Wholesalers Extension* development boasts the heading: *'Sakeman tussen twee vure oor bouwerk op grafte'* [Businessman between two fires over construction impact on graves]. The article continues, *'Daar is vermoedelik oorskot van die stad se eerste Swart trekarbeiders onder die*

grond' ... 'Verskeie geraamtes is voorheen onder Samy's Cash & Cary se geboue en parkeerterrein...gevind' [Subsurface skeletal remains of the city's first Black migrant workers are expected at the site... a number of skeletons have been discovered from under Samy's buildings (?) and at the Samy's parking lot]. The almost conviction of the site in question being the 1870's 'Black' migrant worker cemetery is extended to the heritage management arena: 'The site in question is said to be 100% cemetery, 1870's African burial ground in Kimberley North... recommended for heritage site declaration in 2004' (NBYKB 2014) and 'It is therefore required that a new heritage report should be commissioned that would focus on the impact of the warehouse extension on the historical cemetery' (SAHRA 2015a).

Despite the general sensitivity of the greater area with reference to formally mitigated skeletal remains, the 78 Transvaal Road and the Neotel remains along Lawrence Street, as well as more informal oral reports on additional graves, not all development in the area have exposed graves: In 2004 during construction of the Samy's Wholesalers depot development Pillay reported on skeletal remains, first to the police, with the case referred to the McGregor Museum upon verification of the remains being of archaeological and not forensic context. A 2008 extension to the Samy's Warehouse depot development yielded no skeletal remains. Two (2) swimming pools have been constructed in recent years in the immediate neighborhood, 1 in Lawrence Street and 1 in Grever Square Street, neither of which have, according to resident reports, yielded human remains. The absence of skeletal remains along the Quinn Street portion of the Neotel line has already been mentioned. This in turn was supported by Sol Plaatje Municipal information: No graves were reported on during the 1980's construction of Quinn Street. However, the absence of a report on graves should not be interpreted as confirmed 'evidence of absence'. Municipal staff directly involved in the Quinn Street development is no longer in the employ of the municipality and different legislation and practice were in place (Pers. Comm.: Mike Steyn, Sol Plaatje Municipality).

Steyn reported on SPM records relating to a 1940's residential development of the immediately affected area. The 1980's development of Quinn Street resulted in the demolition of residences situated on then Erf 7542 and Erf 7543, with portions of these erven now forming part of Erf 44500. Reports also indicate that a creamery was known to be situated in the area, roughly 60 years ago (Pers. Comm.: Gabriel Goa, Kimberley resident), serving to further sketch the 1940's Colonial Period urban landscape of the immediate area.

2.2.2.4) Reconsidering Maps

Maps of early Kimberley are difficult to come by, more so maps that can assist in verifying the area in question as part of the inferred 'Black' migrant worker cemetery or not, or assist in demarcation of the boundaries thereof. The often problematic, albeit largely complimentary interdisciplinary sciences of history and archaeology, with their varying emphasis specifically on primary data type; history with its focus on the written or documented record and archaeology, with excavation being the primary method of data retrieval, are not lost on the case of Erf 44500, Kimberley.

Further difficulty in resolving the issue of the 'Black' migrant worker cemetery is the general lack of information. Morris (2004) provides some direct excavation and limited archival information. The absence of a report on the 2012 Neotel mitigation comes with evident negative impact, although limited information on excavation was reported on by Lightfoot and Morris. A request for access to documentation on the site, including proclamation and research information was forwarded to SAHRA on 26 January 2015 with site information requested by 2 February 2015. No response was received from SAHRA: For purposes of the immediate discussion inferred to reflect on the absence of site information in SAHRA records.

In order to provide a framework for analogy, comparison and discussion it is, despite the lack of information, necessary to construct a rough site description. The DN 1879 description of the 'Black' migrant worker cemetery being 'in close proximity' to the European cemetery, interpreted by Morris (2004) as being situated 'north' of the European cemetery is for purposes of a preliminary site description taken as correct, with north being anywhere north of the European cemetery, including directly north, directly north and cross-cutting Quinn Street, directly north of Quinn Street or somewhere north of Quinn Street. Morris (2004) also focusses description on the number of skeletal reports from the general Transvaal Road (Phakamile Mabija Road) area. A rough western border for the cemetery site can loosely be defined as in the vicinity of

Transvaal Road, including areas west and east thereof, implying that Transvaal Road may in fact run through the cemetery, but with the majority of actual skeletal data coming from the area immediate east thereof. The DN 1879 report states that graves were dug between 15-20cm (6-8 inches) apart. The report further states that ‘Six hundred and four natives were interred here during the past year...’ and also reporting on the fact that the cemetery in question was not the 1st cemetery, an earlier, already defunct a good few years prior to the DN 1879 report was commented on. It can thus reasonably be inferred that the cemetery in question was used for approximately 8 years. If an estimate is taken of approximately 600 burials per year over 8 years, equaling 4,800 graves in total (600x8=4,800), then Morris’ description of an expected 4,000-5,000 graves seems very accurate. If an estimate of approximately 3m² is assigned to each grave, considering described close proximity then 600 burials over an 8 year period at 3m² per grave gives an estimated cemetery site size of 1.44ha (600x8x3m²=14,400m² or 1.44ha) for the site in question. Should a slightly more lenient grave size be considered, say 4m², then proposed cemetery site size can reach 1.92ha (600x8x4m²=19,200m² or 1.92ha). In conclusion the estimated 4,800 graves comprising the ‘Black’ migrant worker cemetery may well be inferred to relate to a rough 1.4-2ha cemetery site area.

Chief Surveyor General (CSG) maps of early Kimberley are basically divided between Kimberley North, on the property Vooruitzicht 81 and then Beaconsfield (later Kimberley South), on the property Bultfontein 80. However, these maps serve little purpose in answering the type of Erf 44500 / ‘Black’ migrant worker cemetery site specific questions.

Mabin’s (1986) paper, a notably informative publication on early Kimberley provides a more concise, demarcated map of early Kimberley, Beaconsfield, and surrounding areas and landmarks, including specifically mining areas, labelled in the publication as ‘Map of Kimberley area circa. 1895’. The Mabin map indicates a number of ‘open space’ areas in the immediate vicinity of the *Samy’s Wholesalers Extension* study site, including the Pioneer cemetery area, the area immediately north thereof, including the Erf 44500 study site and cross-cutting Quinn Street and also an adjoining area, north of Quinn Street and bordering Transvaal Road; all potential cemetery sites or portions thereof. However, it is important to read Mabin’s map for the purposes for which it was redrawn: To indicate the then existing areas of Kimberley and how political and economic, and resultant socio-cultural aspects impacted on ‘lifeway’ and associated therewith settlement pattern, including the later location of compounds, locations and workers villages. It is important to take cognizance of Mabin’s acknowledgements: ‘The skills of Phil Stickler in drawing Figs 1 and 5...’, with Figure 5 being the map in question. The redrawing is very similar in layout to the 1986 1:50,000 topographic map details of the area in question, limited to geographic boundaries of then known areas, but importantly not indicating the Quinn Street alignment. Significant though is the presence of the railway line running roughly along the modern day Quinn Street alignment on the 1941 1:50,000 topographic map, with the railway line between Cape Town and Kimberley known to have been completed in 1885. It can reasonably be inferred that this portion of the railway line, not forming part of the major rail alignment between Cape Town and Kimberley was completed at around the same time.

When one considers the 1879 Deduction Plan no 261 of Kimberley, Vooruitzicht 81, Deduction Sheets 6 & 7 are of direct significance. Deduction Sheets 6 & 7 indicates the greater Erf 44500 area simply as ‘Deed of Grant - KimF1-12’, but lacking site specific information. However, these deduction sheets are in themselves informative: By 1879 Transvaal Road was basically laid out, so were street alignments towards the south of the Pioneer cemetery – including Cemetery Street to the south thereof. Of note is the boundary of the Pioneer cemetery, specifically the northern boundary, excluding the Jewish portion. Deduction Sheets 6 & 7 is indicative of early Kimberley being systematically formalized, with formalization inferred to be primarily based on preceding more informal land-use patterns. The early registration of a property in the direct vicinity of the *Samy’s* 2008 site, with a road or access way indicated immediately south thereof is of significance; it may designate an early road or access way having been operational in the area as early as 1879, upgraded in 1885 at the latest for railway purposes. It is unlikely that such a large scale development would have impacted directly on a cemetery which became defunct at the most 6 years prior, at a time when it can reasonably be assumed that typical ‘Black’ or Later Iron Age (LIA) grave demarcations; simple stone cairns, stone markers or perhaps perishable (wooden) demarcations would still have been clearly visible, the deceased may still have been known to family and acquaintances living in and around town, and time alone would not have resolved DN 1879 reported on sanitary concerns. It can thus reasonably be inferred that the ‘Black’ migrant worker cemetery would have been situated either north or south of the 1885 railway line; either north or south of the current basic alignment of Quinn Street.

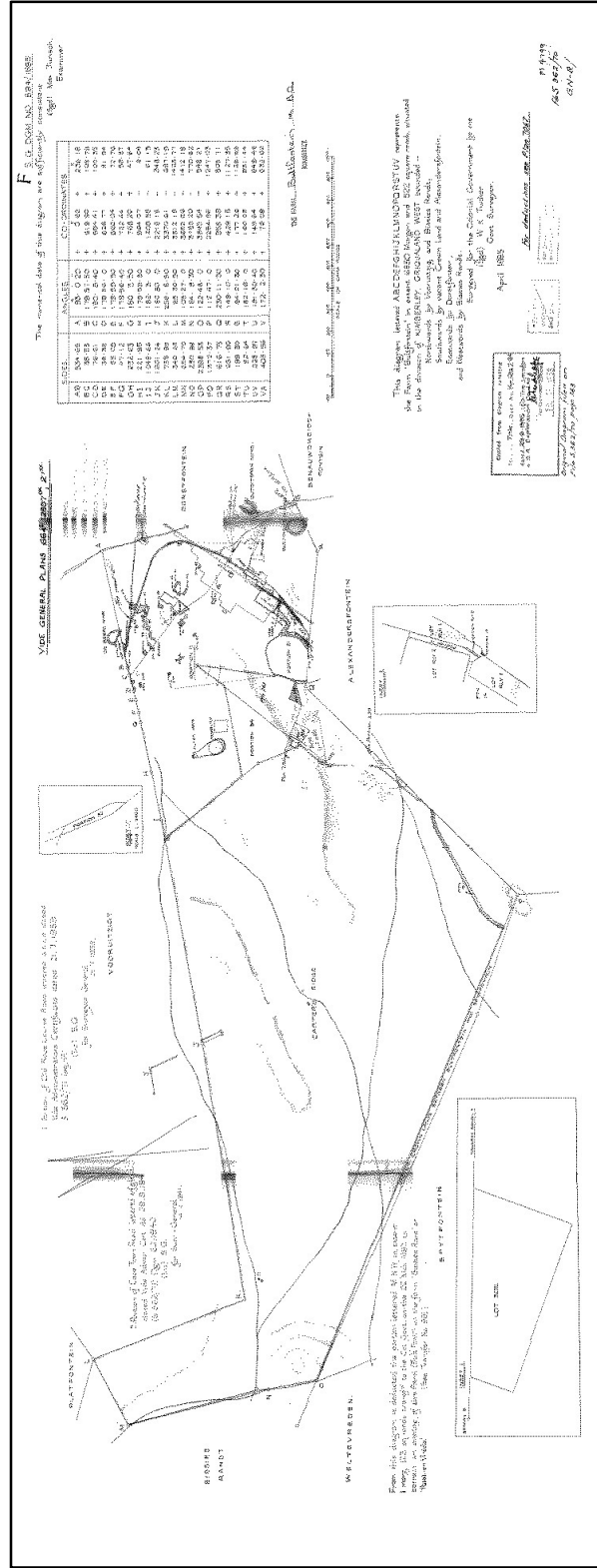
Merely 10 years later the 'Deed of Grant – KimF1-12' area was largely formalized: The railway siding was registered and the majority of the properties had private title deed registrations by 1899. With specific reference to the registered railway siding on the 1889 map, it is important to note that construction of the railway line must have been completed at least 4 years prior to its 1st inclusion in the 1889 survey diagram. Likewise it can reasonably be assumed that the residential area north of the railway siding, as well as development south thereof followed suit in formalization and registration: It is highly likely that informal settlement pattern formed the basis of 1889 lot layout and registration. Accordingly it can reasonably be concluded that it is highly unlikely, considering traditional LIA grave demarcation custom, time frames with specific reference to 'memory' of the deceased, the reported on DN 1879 sanitary concerns and increasing capital – labor conflict and uprisings reported on by Mabin (1986) during the 1880's, that at most 10 years after a cemetery had become defunct development would have been imposed on the locale.

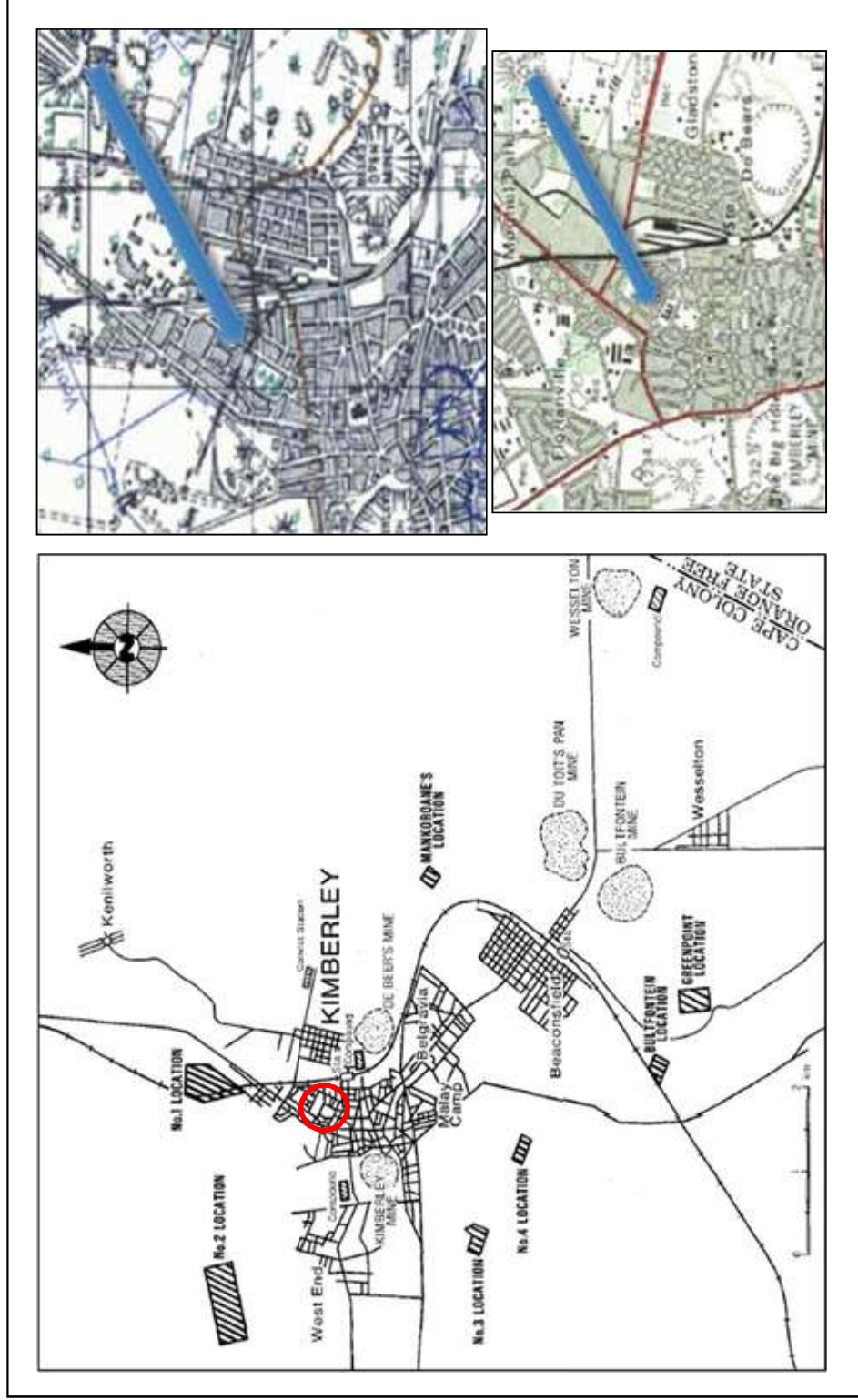
Interesting in the 1889 Kimberley diagram is the area to the south of the railway siding: For the 1st time a small 'Jewish cemetery' section is added to the European cemetery, directly north-east of it Beit Street, and across from Beit Street to the north-west a school and south-east thereof, between Beit Street and the railway siding an area demarcated as Lot 88-104. Geographically the Lot 88-104 area conforms to the description in the DN 1879 report: *'The burial ground for natives – This is situated in close proximity to the European cemetery...'*, with 'close proximity' then implying 'north, across Beit Street'. CSG records for the Lot 88-104 property don't include geo-referenced details; however a rough estimate would designate a property size of approximately 1.3+ha; very close to the minimum calculated site size bracket, 1.44-2ha, for the approximate 4,800 graves of the 'Black' migrant worker cemetery.

The Lot 88-104 area today forms part of the Diamantveld Primary School. The school opened its doors in the beginning of 1938 (Pers. Comm.: Mike Steyn, Sol Plaatje Municipality), allowing for an approximate 59 year period from the time the 'Black' migrant worker cemetery became defunct to development. 59 Years approximates to roughly 2 generations. It is likely, considering weathering of traditional LIA grave demarcations, the recorded high rotational flux in Kimberley's early population, described as early as 1874 by Tyamzashe as: *'... you will see hundreds of them leaving the fields, and as many arriving... almost every day'* directly related to time frames associated with 'memory' of the deceased and the greater time afforded natural rehabilitation of sanitary concerns reported on in 1879, that 'memory' of, affection with and visual demarcation of a 'Black' migrant worker cemetery may well have been lost on 1930's development planning. It is proposed that the 1889 demarcated Lot 88-104 represents the 1879 reported on 'Black' migrant worker cemetery. The proposal is supported by, albeit mainly oral records of skeletal remains having been found at the site locale (Morris 2004).

When the 1889 diagram is compared with the 1941 topographic map slight further additions along the northern boundary of the Pioneer cemetery is evident, with small sections added to both the Jewish and European sections thereof. These additions by implication came with slight alteration to Beit Street. It can be inferred that despite early Kimberley layout having *en large* dictated modern layout of the town proper slight alterations to alignments and associated land parcel sizes may well be expected.

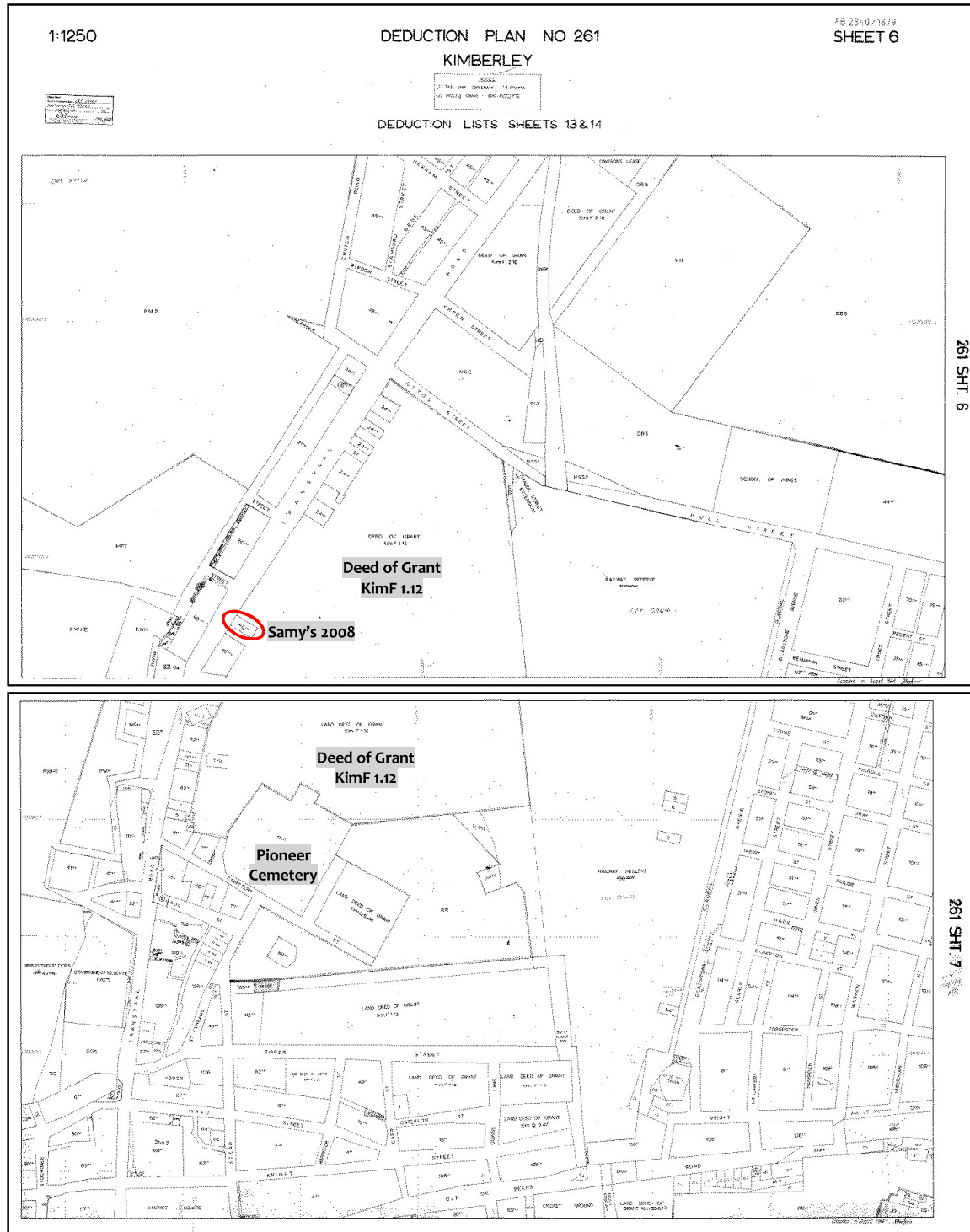
Archaeological and Cultural Heritage Impact Assessment – Samy's Wholesalers Extension, Erf 44500, Kimberley, Sol Plaatje Municipality, Northern Cape





Map 6: Map of Kimberley, circa 1895 (Mabin 1986), with inserts from Gaigher (2014) – top 1: 50,000 map 1941, bottom 1: 50,000 map 1986

Map 7: Deduction Plan No 261 of Kimberley North, Vooruitzicht 81, 1879 (CSG Record 2340/1879)



Map 8: Deduction Plan No 261, Sheets 6 & 7, Kimberley North, Vooruitzicht 81, 1879 (CSG Record 2340/1879)

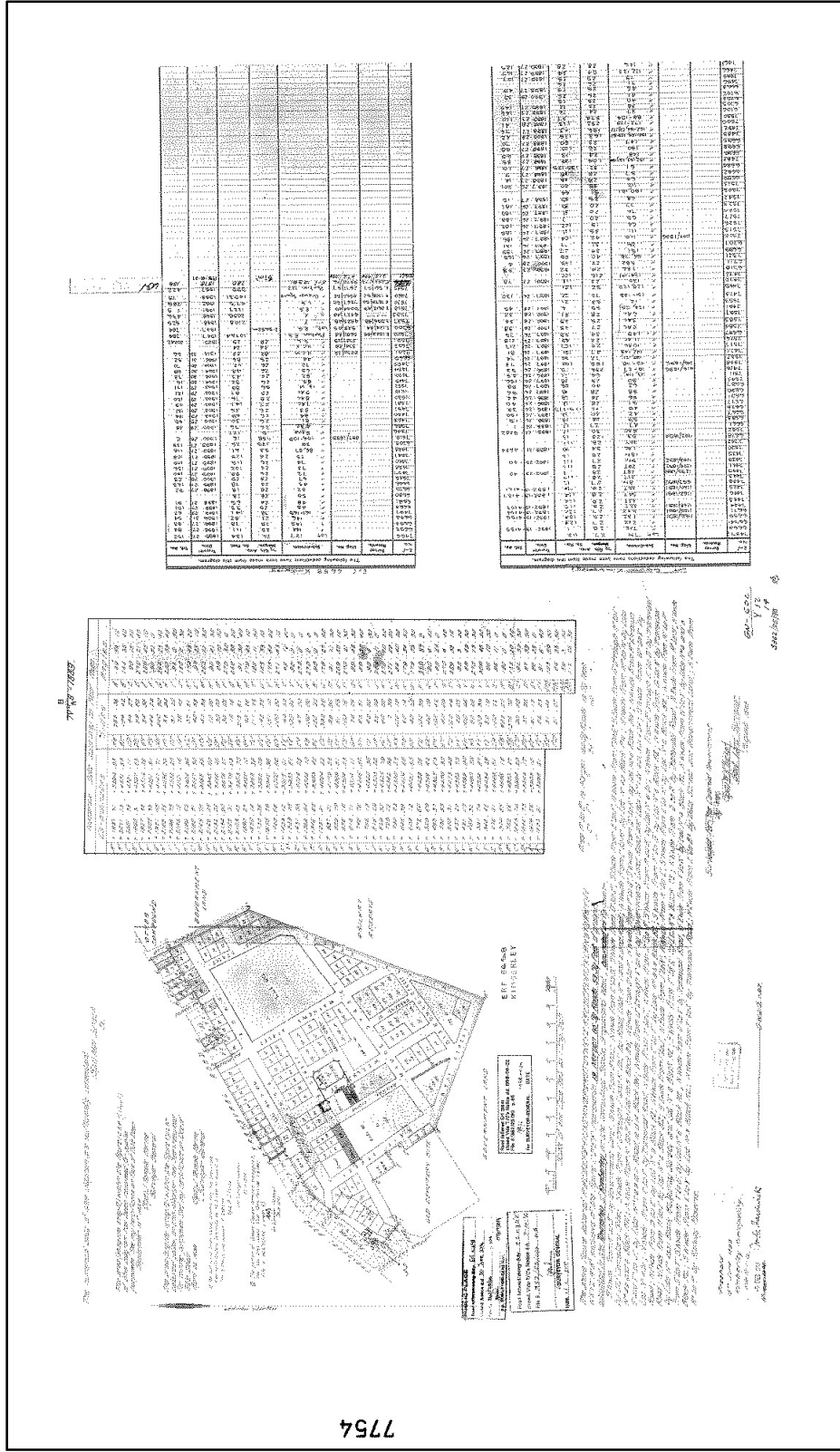
DEDUCTION PLAN NO 261
KIMBERLEY

- (1) This plan comprises 10 sheets
- (2) For further deductions sheet 14

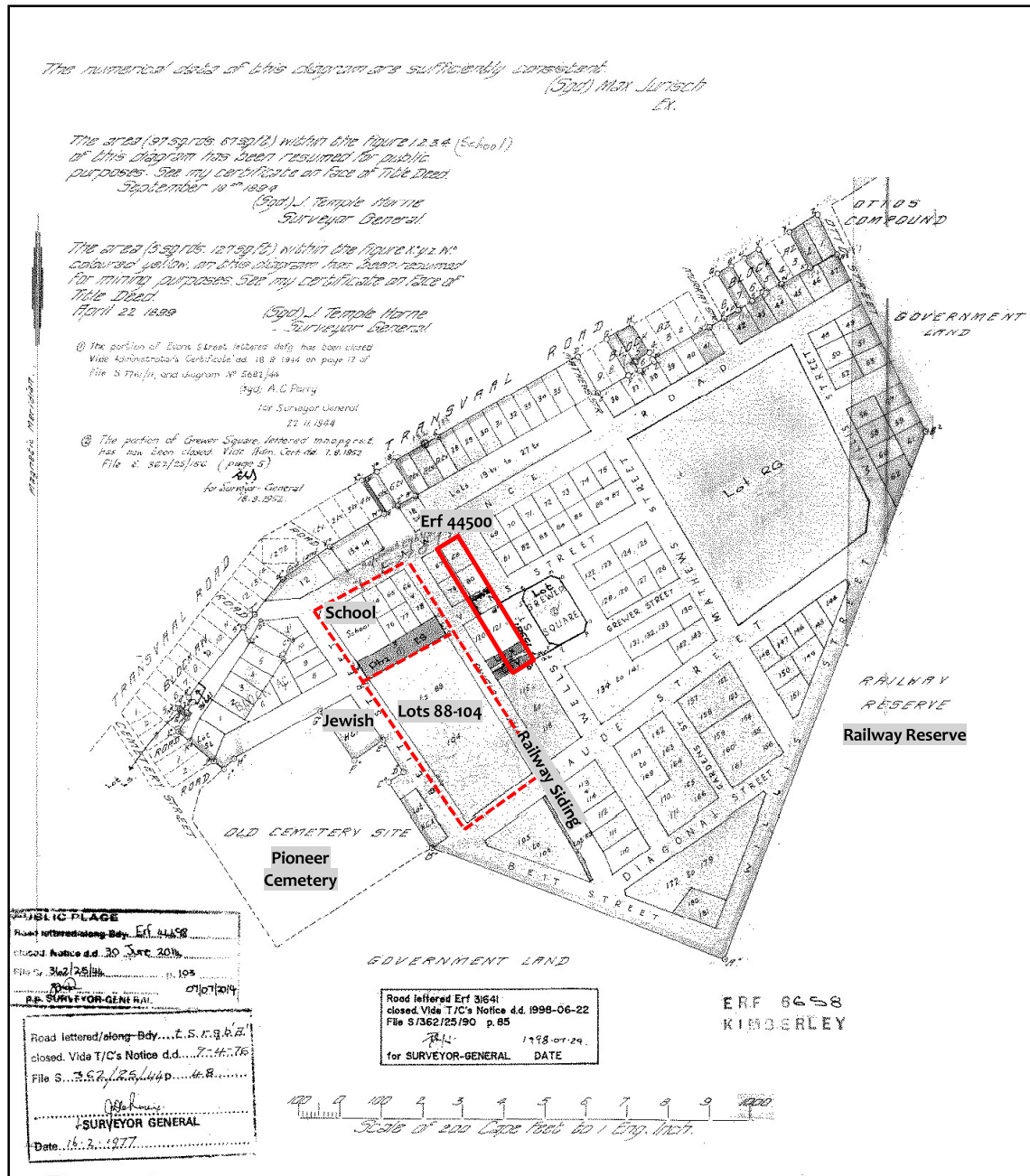
Table 3: Deduction Plan No 261, Sheet 13, Kimberley North, Vooruitzicht 81, 1879 (CSG Record 2340/1879)

Archaeological and Cultural Heritage Impact Assessment – Sammy's Wholesalers Extension, Erf 44500, Kimberley, Sol Plaatje Municipality, Northern Cape

[illegible]



Map 9: The Deed of Grant - KimF1-12' area, Kimberley North, 1889 (CSG Record 6658-8/1889)



Map 10: Extract from the 'Deed of Grant - KimF1-12' area, Kimberley North, 1889 (CSG Record 6658-8/1889)

2.2.2.5) Hypothesis 2 – Erf 44500 as part of an early Black residential area with identified graves reflecting LIA burial custom of burial at a homestead

Historical documentary evidence, primarily based on cartographic CSG Records of early Kimberley *en large* serves to demystify the hypothesized unknown location of the DN 1879 reported on ‘Black’ migrant worker cemetery, with the locale of the cemetery proposed to be the demarcated Lot 88-104 area, fitting with the 1879 geographical description of the cemetery being ‘in close proximity’ to the European cemetery, early Colonial Period government standards of record keeping; lot demarcation and registration, and with Lot 88-104 meeting site description requirements with reference to expected number of burials, directly equated to estimated site size.

Demystification of the hypothesized unknown location of the 1879 reported on ‘Black’ migrant worker cemetery however does not explain the presence of skeletal remains north of Quinn Street; to date with remains of 4 individuals mitigated from the Samy’s Wholesalers depot parking lot and 9 skeletons exhumed from the Lawrence Street section of the Neotel development.

Mabin (1986) provides for a possible explanation: ‘When the introduction of closed compounds was first mooted in the late 1870’s, the Black population of Kimberley resided in three different environments: at workplaces, on residential streets of the town itself, and in the locations. Locations remained small until about 1880, but grew rapidly with the onset of the recession.’ Further thereto: ‘There had been a degree of spatial segregation between various groups in Kimberley from early in its history. Some of the earliest “locations” on the outskirts of Kimberley were semi-rural in nature, with sheep and cattle kraals whence Koranna and Tswana producers supplied milk and meat to the mining camps. Most of the land in and around the camps was owned by the London and South African Exploration Company. By 1874 this company had allowed or encouraged the emergence of locations, occupied mainly by Africans,... In April 1875, the company allocated a location site where Kimberley’s railway station was built a decade later. Africans were encouraged to move to this site from the town by a stand rent of 2s 6d, only a quarter of the rent demanded in the town proper. However few seem to have done so, for in July 1876 there were said to be only 400 hut owners in all of the several locations... In the wake of a rebellion by part of the population of the territory surrounding Kimberley in 1878, the government proclaimed Cape law relating to locations to be in force in Griqualand West.’ For purposes of this discussion Mabin (1986) concludes: ‘The residential circumstances of the Kimberley workers were extremely varied, and to some degree reflected the diverse origins of the working class as well as its diverse employment patterns.’

It is suggested that the residential area east of Transvaal Road and north of Quinn Street, encompassing the Erf 44500 study site was an early primarily Black residential area, perhaps during the late 1860’s and throughout the major part of the 1870’s. Grave sites encountered to date conform to widely practiced Later Iron Age (LIA) burial custom of burial at a homestead with specific cognizance to Kimberley’s 1889 recorded layout; with graves encountered identified on the rough perimeters of former lot stands. In accordance it can reasonably be inferred that more graves will be present in the area, expected to be fairly strategically placed towards the outer perimeters of early stands and varying in number per stand.

1889 Formalization of the layout is inferred to have had its roots in earlier, less formal settlement pattern: Layout may reflect recording of a primarily Black residential settlement pattern at the time. More likely it may reflect the formalization of a development renewal program, with its basic layout adopted from the preceding settlement pattern. An 1889 development renewal program, based on a largely adopted layout, would be in striking accord with the 1940’s ‘residential’ development, effectively little more than a residential renewal program, again with minimal effect on basic layout of the immediate area.

Burial at a homestead is a widely practiced cultural custom amongst people of LIA cultural tradition, not limited to South Africa but extending beyond the borders thereof, with specific reference to the ‘migrant’ Black population of early Kimberley not having been limited to ‘South Africans’ only. It is a custom practiced to this day, most evident across the rural landscape but extending to fairly formalized villages. Many a village today is characterized by a cemetery, in many cases more than one, alongside with burial at homestead yards – with burial type thus largely guided by choice. A similar type scenario cannot be excluded from early Kimberley life; the reported on ‘Black’ migrant worker cemetery does not exempt

early Kimberley from widely practiced culturally guided burial at homesteads. On the traditional LIA cultural landscape, amongst the various LIA tribes, burial is guided by ‘male’ and ‘female’ space associated with various aspects of the homestead surrounds, at homesteads with temporal depth of occupation resulting in small ‘cemeteries’ situated at various on-site locales. Burial at the homestead is closely associated with the practice of ancestral appeasement, a practice that nurtures the relationship between the living and the dead, for purposes of this discussion directly reflecting on traditional respect for, and associated therewith the conservation of graves.

LIA burial is by custom shallow, or shallower; the concept of ‘6ft under’ is essentially European in origin. In the vicinity of Erf 44500, inferred to also be the case at the nearby Lot 88-104 area, depth of burial is expected to also be to a degree dictated by the underlying geology; the ‘*consolidated calcified sand / calcrete*’ member situated at approximately 60-65cm below the surface. A hard calcified stratigraphic layer may well have contributed to generally shallower graves in an area where grave depth is not prescribed by custom or religion.

With reference to the custom of burial at homesteads cognizance need to be taken that more than 1 grave at a homestead often result in the formation of small on-site cemeteries, the arrangement of graves in these cemeteries more than often done in row-like format. Small rows of graves are not inconsistent with homestead burial practice; with specific reference to the Black residential area in question, perhaps more so in the culturally translated smaller confines of an urban ‘lot’ environment.

As reported on by Mabin (1986) the 1870’s, and more so the onset of the 1880’s, saw an increasing emphasis on the removal of Blacks from Kimberley town to demarcated areas on the outskirts thereof, be it compounds or locations, first by means of largely company ‘*encouragement*’; lower rent at location stands than in the town proper, but with relocation from 1878 onwards increasingly enforced by legislation. Changing political circumstances, with its associated socio-cultural repercussions resulted in a noticeable change in Black settlement pattern. As Blacks were removed from the town proper, they were also removed, in part, from their heritage, their grave sites situated in town – be it at the ‘Black’ migrant worker cemetery or at their former homestead lots. Once a community is removed from their heritage resources, with value and use systems breached, ‘loss of memory’ sets in faster. The essential ‘migrant’ makeup of early Kimberley’s Black population, reflecting on already compromised and thereby more fragile tradition, coined with the removal of these people from their heritage resources is inferred to be key elements in rapid ‘loss of memory’.

With consideration to the Lot 88-104 ‘Black’ migrant worker cemetery having become defunct circa. 1879, with subsequent development on the site during the latter part of the 1930’s, an approximate 59 year or 2 generation span, timeframes generally associated with ‘loss of memory’ is in vast discord with Indigenous Knowledge Systems (IKS) records. Both compromised LIA tradition and the removal of these people from their heritage resources are argued as variables that would have resulted in the rapid ‘loss of memory’. Directly associated therewith would be weathering and loss of traditional LIA grave demarcations and the approximate 59 year period allowed for natural rehabilitation of 1879 reported on sanitary concerns. However, in the case of the 1930’s development on the Lot 88-104 stand the impact or effect of political power in development decision making cannot be overruled.

2.3 - Field Assessment

Fieldwork was done over a 4 day period: 5 & 6 January 2015 - the site was systematically lowered to a level of approximately 30cm below the surface. 7 & 8 January 2015 – the site was sealed with a fine gravel layer. A spoon was uncovered at the SWE-1 locality (S28°43'54.3"; E24°45'59.5"). The 30cm level can be interpreted as immediately overlying the 1940's stratigraphic member.



Map 11: Results of the fieldwork



Plate 1: View of the Erf 44500 study site [1]



Plate 3: The spoon uncovered at SWE-1



Plate 2: View of the Erf 44500 study site [2]



Plate 4: View of the Erf 44500 study site [3]



Plate 5: View of the Erf 44500 study site [4]



Plate 7: View of the Erf 44500 study site [6]



Plate 6: View of the Erf 44500 study site [5]



Plate 8: View of the Erf 44500 study site [7]

2.4 – GPR Scan Summary

The GPR scan was conducted by Barry Barnardt, Terra Scan cc (Terra Scan), with the relevant report referenced as:

- Barnardt, B. (Terra Scan). 2015. *Ground Penetrating Radar Survey of Erf 44500, Corner Quinn and Lawrence Streets, Kimberley, Undertaken on Behalf of P&V Pillay Family Trust, 23-24 January 2015.*

Barnardt (2015) concludes that: ‘During the on-site survey, no consistent high or lower density patterns of subsurface disturbance were detected that could reflect rows or row-like patterns, or infrequent random scatters of graves as described in the ToR (i, ii, iii & vi), with grave like disturbance inferred to be variable in size, primarily rectangular in shape, but which may approach ‘square shaped’ disturbances (double or multiple graves) and which may approach ‘oval’ shapes. No disturbance other than object ‘A’ and ‘B’ penetrate the geological member situated at 56cm below ground surface’, and including that ‘the change in geology extends across the subsurface extent of Erf 44500.’ On-site scan results (271 scan strips) were subjected to off-site data analysis. Objects ‘A’ and ‘B’ are accordingly further described as:

- ‘Object ‘A’ is a void measuring 1.5m x 0.7m situated at approximately 30cm below the surface, it extends down to a depth of 1m below the surface. This object seems to have a flat surface area that suggests that it could be an old sewerage pit or other manmade void. Object ‘A’ is situated 9.7m from the Quinn Street sidewalk and 8.9m from the Lawrence Street kerb.’ [Object ‘A’ – S28°43’52.3”; E24°45’56.3]; and
- ‘Object ‘B’ is situated on the sidewalk, 0.9m from the Lawrence Street kerb. The object measures 1.2m x 0.6m and is situated at a depth of approximately 48cm below the surface and extends down to a depth of 90cm below the surface. The object represents a similar GPR signature as a void but no flat surface is present in this location.’

With reference to the above – Object ‘A’, as interpreted by Barnardt, represents an old sewerage pit. The sewerage pit is directly related to an old unused, but still active sewerage line. The proposed warehouse will feed directly into this service line. Object ‘B’ is situated on the sidewalk adjacent to Erf 44500, the object or void will not be impacted by development. The object is inferred to be of infrastructural nature.

Feature H, Block One (1) comprises the remains of what is inferred to be an old floor slab, measuring approximately 3x3m in size, more or less 10cm thick, situated just below the sealed surface. Remains are in accordance with the 1940’s residential development record, with specific reference to existing building plans for Erf 7542. The structure was demolished during the 1980’s Quinn Street development.

* * *

1. GPR scan results prove conclusively that no high or lower density subsurface disturbance patterns are reflective of an underlying cemetery at the *Samy’s Wholesalers Extension*, Erf 44500, Kimberley, study site.
2. No identified subsurface disturbance represents a grave-like feature or features.
3. [Feature H (S28°43’52.7”; E24°45’56.8”), remains of a 1940’s floor slab, conforms to recorded evidence of a residence situated on Erf 7542. Remains pre-date 60 years of age. The structure was demolished during the 1980’s development of Quinn Street. Floor slab remains of the demolished structure are of no historical architectural significance. It is recommended that development proceed without the developer having to apply for a NBYKB site destruction permit.]



Map 12: Locality of Object 'A' in relation to the Erf 44500, Kimberley, study site



Map 13: On-site GPR scan results of Erf 44500, Kimberley

2.5 – Heritage Consultation

On site information gathered during the fieldwork period (5-8 January 2015) yielded a wealth of information with regards to concerns potentially applicable, for purposes of *Heritage Consultation* reporting briefly summarized as:

- **Residents and the Church:** Initial comments by residents emphasized concern for the graves with the opinion being that the residential area comprises an old cemetery and that development will impact on the graves. Residents were dismayed with the fact that Pillay would want to develop across an old cemetery regarding such a development as unethical and insensitive. Social concerns raised centred on the loss of the 'park', being valued by the community, but extending to increasing traffic associated with the development, current traffic concerns, dust during the construction phase, danger to pedestrians, increasing crime in the area as a result of the development and an expected decrease in property value. Aggression against the development was evident, a resident stated that Morris was going to act as 'Council representative' on their behalf and that they were planning to oppose the development by petition and other actions. However, not all residents were opposed to the development. It was stated that the park was mostly used by those living nearby, but that residents living further away seldom made use thereof. Comments were made that the park is unsafe and often, primarily over weekends, used for recreation by people not from the area.

Concerns by the church centred on visual impact, noise and parking constraints as a result of the development.

It was evident that there was uncertainty with regards to ownership of the property; some were of the opinion that Erf 44500 was the property of the church others held that it was municipal land.

- **Developer Community:** Questions from the general developer community centred on why the development was stopped, with specific reference to 2 other developments in the area, a recently completed development north along Transvaal Road and an ongoing development further south in Transvaal road, neither of which was stopped for heritage purposes. Resultant questions ranged from when development can be stopped, for how long, the associated process, possible costs involved etc. Concern was raised with regards to the 'municipality having sold Pillay a cemetery site' and why heritage aren't included in Title Deeds and the impact of such inclusion on property values.
- **Parties with a 'bona fide' heritage interest:** For purposes of this report the group is mainly defined by a number of 'drive-by' inspectors – cellphone photographers who never left their vehicles, often leaving hastily upon identification. Morris (McGregor Museum) and Garth (Bennymore?), Head of Heritage Studies, Sol Plaatje University visited the site. The Volksblad closely followed work at site. Amongst the transparent portion of this group opinion held was that Erf 44500 comprised the cemetery in question, but uncertainty as to whom the property belonged to was discernible.

The Heritage Consultation meeting was held on 26 January 2015, 18:00 at the Samy's Wholesalers depot receiving area. With consideration to the above identified concerns it was decided to also address more general concerns, planned as addressing the *Samy's Wholesalers Extension* development and related heritage issues with regards to the inferred 'Black' migrant worker cemetery first, followed by concerns raised by residents, the church and the developer community.

The *Heritage Consultation* meeting was advertised on site, at 4 locales, in 3 languages; English, Tswana and Afrikaans. In addition an advertisement was placed in the DFA newspaper, 19 January 2015. Consultation was not done with regards to grave relocation – Advertisement and notice requirements for general heritage consultation are not prescribed by SAHRA. HIA's are as a norm not advertised, with consultation where applicable done by notice in accordance with the NHRA 1999, Section 38(3)(e) to the HIA specialist. It was decided to open the heritage consultation also in terms of Section 35(5), with reference to the Section 35(3) notice in the SAHRA 'Cease Works Order'.



Figure 4: Heritage Consultation notices

2.5.1) Results of the Heritage Consultation

Minutes prior to the meeting Peet Louw, Ward Councillor of Kimberley North, introduced himself to the project proponent and ArchaeoMaps, requesting some immediate information on the development.

The meeting started with an introduction of the *Samy's Wholesalers Extension*, Erf 44500, study site and the inferred 'Black' migrant worker cemetery, the various case scenarios that may be present on site, no concern, partial conservation, mitigation or a 'no-development' option and indicating rough requirements associated with each; conservation will go hand in hand with fencing of the site for formal conservation purposes, Phase 2 mitigation under a SAHRA permit process etc. Attendees were then asked if any person claimed ancestry to any of the graves. As expected none did – confirming consultation results of the Morris (2004) public meeting.

After the brief introduction the session was opened for comments. The meeting immediately turned from a heritage consultation meeting to a literal 'Ward meeting'. It became apparent that a Ward register was circulated and Lowe early on in the meeting stated that he had instructed the developer to stop all work. Community concerns dominated; including emotional over-exaggerations such as that a family member had contracted asthma after 4 days of work on site – Emotional over-exaggerations however not uncommon during public meetings. Concerns raised at the meeting echoed that previously recorded. In addition residents stated that they expected Pillay to have send them letters, they were upset because trees had been uprooted, prostitution will increase and development will block light. Concerns with respect to property values were reiterated. Residents were upset because the municipality wasn't present. A radical change in attitude with regards to heritage sensitivity was apparent; from sensitivity and ethical concerns with regards to

development on a cemetery to an open ‘*We don’t know them – we don’t care*’ attitude. Uncertainty to ownership prevailed. Towards the end of the meeting conversation turned to when and how Pillay acquired the land and if Kimberley residents who grew up in the area would also be able to acquire land for development in the vicinity. The proposal was *en large* supported by residents, without enquiry as to the type of development proposed, or possible heritage constraints.

Comment by the church focused on visual impact, parking and noise.

On at least 3 occasions requests from the developer community was raised with respect to the fact that heritage concerns should be addressed.

Heritage matters raised can best be described as cryptic, characterized by ‘conviction’ of Erf 44500 forming part of a cemetery, including statements that Samy’s Wholesalers is built on ‘hundreds’ of graves. Sentimental statements of disrespect with regards to the early Black pioneers of Kimberley were raised against the project team. Morris commented on municipal presence at former public meetings, stating that the municipality should have been present. Comment extended to the 2004 public process with brief reference to a much smaller Neotel public meeting. It was stated that the project team have met with the municipality earlier in the day and that it was supposed to have been a heritage consultation meeting not a public process with reference to grave relocation. Morris also commented on the fact that work proceeded with a ‘Cease Work Order’ issued. It was stated that compliance process concerns will be addressed directly with SAHRA. Contributory comment from Morris included limited details on the Neotel Phase 2 mitigation and an ‘80’s map that indicate a number of ‘open spaces’ in the area. However, with the meeting having literally been ‘hijacked’ for Ward purposes heritage specific matters could not evolve into discussion or into any form of information exchange.

In conclusion the meeting was largely unsuccessful, having effectively been turned into a Ward meeting. The radical change in attitude with regards to heritage by residents and those with a ‘*bona fide*’ ward interest was notable, ascertaining that initial heritage concerns were pretentious. With the end of the meeting marked by land acquisition and development interest a certain degree of doubt must be cast on general social concerns raised.

A private meeting with Lowe after the Heritage Consultation session served to ease the situation. Lowe mentioned that he was contacted just before the meeting with a request to intervene. The name of the person who requested the intervention was mentioned, but not familiar to ArchaeoMaps. A few heritage matters were discussed and the heritage process briefly explained. Lowe commented on the fact that the people may well be more acceptable to a residential development (but this not in accordance with the development programme or sales agreement). Further negotiation with the community was to ensue. Lowe stated that certain attendees should not have been at the meeting including specific businessmen and some in the political arena. This attitude of who should and who should not have had a right to attend was also prevalent amongst the residents. At the meeting an employee of Pillay was silenced by a resident stating that she had no right to speak because she worked at the Samy’s store. It was explained to Lowe that the very dynamics of heritage consultation is open and in fact people from as far afield as the Eastern Cape, North-West and Mozambique may well have had a direct interest in the site in question, in which case their comments, from a heritage perspective would have received precedence over that of the community. The very dynamics of heritage consultation versus that of Ward concerns remains problematic.

Only 37 attendees signed the Heritage Consultation register, though many more were present. It would be necessary to compare registers to verify to what extent the underlying ‘competition’ between heritage and Ward concerns actually went. All attendees who signed the register signed as ‘public’. One registered as a ‘resident’. Heritage specialists and the media were present. Discrepancies of sort make comparison with other heritage meetings difficult; by comparison the Morris (2004) meeting was dominated by McGregor Museum staff and heritage learners; a meeting that resulted in a proposal for Provincial declaration status of the site, on then available information (only).

Two (2) e-mail comments with reference to the heritage consultation was received, both from the developer arena. In both cases correspondents stated that heritage should be addressed and that it is important, but that impact thereof on development should be considered.

Attendees of the heritage consultation meeting, from the development arena, responded mainly telephonically back on the meeting. Comment was raised with regards to the Neotel project: It was the opinion that more information thereon should be available by now for decision making, transparency and to have enabled comparison between the projects and processes. Comment was raised about residential property values, it was stated that the community is grossly 'uninformed' about municipal plans for the area and that implementation thereof will have a direct positive impact on property values. This opinion was extended to a level that suggested the immediate residential area suitable for 'business' development: The town centre need space to expand from a business perspective, property values will increase significantly and heritage may well benefit. It was the opinion of the correspondent that only a 'business zoning' will ensure restoration of the residences necessary to appreciate their architectural and heritage significance. Comment highlighted the fact that community concern regarding how Pillay acquired the property and possibility for residents to also acquire land and develop indicated jealousy and malice. Concern with regards to small business expansion in the immediate area remain strife, not only with respect to direct expansion of businesses but also with regards to property values – will heritage need to be included in Title Deeds and how this will affect business property values?

1



Heritage Consultation – Samy's Wholesalers Extension, Erf 44500, Kimberley – 26 January 2015

	Name & Surname	Address (Suburb/Town)	Capacity (Government department /Specialist/Public)	Contact: Tel / Cell	Contact: E-mail
1	GABRIEL GOA	TOWN	Public	076 507 6148	N/A
2	JAN KLOON	TOWN	Public	082 377 5803	N/A
3	WILFRED TASHIANA	TOWN	Public	082 487 5748	N/A
4	KEVIN NATION	CBD	Public	0740658078	N/A
5	JACOB KANGA	KBT	Public	0824697350	N/A
6	CRIG GOA	TOWN	Public	0823513231	N/A
7	TONY JACOBS	TOWN	Public	0845153130	thomas@tjallparts.co.za
8	T. THOMAS	KBT	Public	082 8022 100	thomas@tjallparts.co.za
9	G. GOSSE	KBY	Public	072 311 433	goss@tjallparts.co.za
10	F. JANSSEN	KBY	Public	0836576148	janssen@tjallparts.co.za
11	M. JANSSEN	KBY	Public	083 714 6316	N/A
12	ZOL KHAMATI	KBY	Public	079 019 0782	N/A
13	JAMES WHITE	KBY	Public	081 019 8152	N/A
14	PAUL JAMES	KBY	Public	0731437219	N/A
15	CHRISTOPHER SHUTTER	KBY	Public	082 609 2551	N/A
16	Marshall McGally	KBY	Public	0828033775	MEGALLY
17	ANNEKE BOSMAN	KBY	Public	0842332267	ANNEKE
18	BESSIE BOSMAN	KBY	Public	0774214946	BESSIE
19	SCHONNES DUBOIS	KBY	Public	0784766773	S.O.I
20	ALBERT MCGALLY	KBY	Public	0630327495	N/A

Samy's Wholesalers Extension, Erf 44500, c/o Quinn and Lawrence Streets, Kimberley, Sol Plaatje Municipality, NC
P&V Pillay Family Trust

2



Heritage Consultation – Samy's Wholesalers Extension, Erf 44500, Kimberley – 26 January 2015

	Name & Surname	Address (Suburb/Town)	Capacity (Government department /Specialist/Public)	Contact: Tel / Cell	Contact: E-mail
1	Corné Bosman	KBY	Public	0760491252	CB
2	KEVIN KANGA	KBT	Public	0826580566	KEVIN@tjallparts.co.za
3	Gordon Bosman	KBY North	Public	0836518929	GORDON
4	Simon Bosman	KBY North	Public	0845149583	Simon
5	Raylene Bosman	KBY North	Public	0765776463	RAYLENE
6	BEVERLY BOSMAN	KBY North	Public	0845137084	BEVERLY
7	MARTHA BOSMAN	KBY North	Public	0789580706	MARTHA
8	CLAUDE BOSMAN	KBY North	Public	0789580706	CLAUDE
9	ANTHONY BOSMAN	KBY North	Public	0761616001	ANTHONY
10	ANTHONY BOSMAN	KBY North	Public	0761616001	ANTHONY
11	ANTHONY BOSMAN	KBY North	Public	0761616001	ANTHONY
12	ANTHONY BOSMAN	KBY North	Public	0761616001	ANTHONY
13	ANTHONY BOSMAN	KBY North	Public	0761616001	ANTHONY
14	ANTHONY BOSMAN	KBY North	Public	0761616001	ANTHONY
15	ANTHONY BOSMAN	KBY North	Public	0761616001	ANTHONY
16	ANTHONY BOSMAN	KBY North	Public	0761616001	ANTHONY
17	ANTHONY BOSMAN	KBY North	Public	0761616001	ANTHONY
18	ANTHONY BOSMAN	KBY North	Public	0761616001	ANTHONY
19	ANTHONY BOSMAN	KBY North	Public	0761616001	ANTHONY
20	ANTHONY BOSMAN	KBY North	Public	0761616001	ANTHONY

Samy's Wholesalers Extension, Erf 44500, c/o Quinn and Lawrence Streets, Kimberley, Sol Plaatje Municipality, NC
P&V Pillay Family Trust

Figure 5: Heritage Consultation – Attendance Register

3 - Conclusion and Recommendations

3.1 - Conclusion

The pre-feasibility assessment for the *Samy's Wholesalers Extension* development, Erf 44500, Kimberley, with its emphasis on cartographic data, primarily CSG Records of early Kimberley, yielded little support for the original Morris (2004) hypothesis (Hypothesis 1) and associated Provincial Heritage Site (PHS) declaration proposal of the DN 1879 reported on 'Black' migrant worker cemetery being situated across the greater terrain, with the boundary of the cemetery unknown but including the *Samy's Wholesalers Extension*, Erf 44500, Kimberley, study site. The hypothesis is based on a Diamond News 1879 (DN 1879) report on the sanitary condition of Kimberley at the time, and commenting on the locality of the 'Black' migrant worker cemetery as being situated '*in close proximity*', by Morris interpreted as implying 'north' of the European or Pioneer cemetery. Tangible evidence in support of the hypothesis includes the skeletal remains of 4 individuals mitigated at the *Samy's Wholesalers* depot parking lot in 2004 (Morris 2004). An additional 9 skeletons were uncovered in 2012 along the Lawrence Street section of a Neotel development, with the mitigation report on the project pending. Oral reports on skeletal discoveries from the general area, including the Diamantveld Primary School property and north along Transvaal Road further support the hypothesis.

Cartographic data, including primarily 1879 and 1889 CSG Records record the systematic formalization of early Kimberley. Coined with literature and archival information focusing on known dates of development and associated formal registration thereof, including specifically development of the railway line, with development having been completed in 1885 but 1st recorded in official survey records of 1889, it is proposed that a similar scenario affected the 1889 recorded residential development affecting the said study site. The 1889 recorded residential development is inferred to have been a 'renewal' development, with layout largely based on preceding more informal settlement pattern, having been a primarily Black residential area. Throughout the 1870's, but more so from 1880 onwards, increasing political and economic pressures, as well as implementation of new legislation, resulted in the relocation of Blacks from Kimberley's town proper to either compound or location settlement on the outskirts of town. It is argued that it is unlikely that a residential development, most probably preceding 1889 in implementation would have been constructed over the 'Black' migrant worker cemetery, which could according to the DN 1879 report have become defunct only after publication of the said report (maximum 10 year period): Time allowed for natural rehabilitation of sanitary concerns reported on in 1879, still visible LIA grave demarcations associated with IKS concepts of 'memory' / 'loss of memory' and increasing capital – labor unrest and uprisings at the time do not support residential development imposed on the 'Black' migrant worker cemetery, within a maximum period of 10 years after the cemetery had become defunct.

Skeletal remains identified at the *Samy's Wholesalers* depot parking lot and along the Lawrence Street section of the Neotel development are argued as consistent with Later Iron Age (LIA) burial practice of burial at a homestead, thereby also supporting the hypothesis (Hypothesis 2) that the area in question was originally a primarily Black residential area. GPR scan results of Erf 44500 indicate no pattern of subsurface disturbance consistent with the area in question having been a cemetery. Neither did scan results identify any additional or singular graves supporting burial at a homestead; but the absence of graves at the study site not contesting the hypothesis either. In accordance with the hypothesis graves may or may not be found, mainly on the outer perimeters of former lot stands. LIA burial at a cemetery or homestead, are both widely practiced cultural custom, mainly guided by choice.

It is proposed that the DN 1879 reported on 'Black' migrant worker cemetery in fact refers to the 1889 registered Lot 88-104 area. Lot 88-104 conforms to the DN 1879 geographic description of the said cemetery being situated '*in close proximity*' to the European or Pioneer cemetery. The parcel, with an estimated size of 1.3+ha complies with minimum estimated cemetery site size calculated, 1.44-2ha, to house the approximate 4,800 graves inferred to comprise the said cemetery.

Based on the Hypothesis 2 interpretation affecting Erf 44500 and GPR scan results verifying the study site in question as not forming part of the Hypothesis 1 interpretation it is recommended that development proceeds as applied for without the developer having to comply with additional SAHRA / NBYKB compliance requirements:

- Development will not impact on any identified graves.
- Feature H, remains of a 1940's floor slab, conforms to recorded evidence of a residence situated on Erf 7542. Remains pre-date 60 years of age. The structure was demolished during the 1980's development of Quinn Street. Floor slab remains of the demolished structure are of no historical architectural significance. It is recommended that development proceed without the developer having to apply for a NBYKB site destruction permit.

Findings of the AIA investigation concludes that the *Samy's Wholesalers Extension*, Erf 44500, study site is of no heritage significance. A heritage site significance assignment is not of relevance.

3.1.1) Comment on the Heritage Compliance Process

It is argued that substandard research and over popularization of a hypothesis, coined with premature recommendations for Provincial Heritage Site (PHS) proclamation status resulted in sectarianism in heritage management on SAHRIS CaseID 6899, the case of the *Samy's Wholesalers Extension* development, Erf 44500, Kimberley, Northern Cape. The NHRA 1999 Section 5 warns against such management practices, it states:

- [1] All authorities, bodies and persons performing functions and exercising powers in terms of this Act for the management of heritage resources must recognize the following principles:
 - (a) heritage resources management must guard against the use of heritage for sectarian purposes or political gain;
- [3] Laws, procedures and administrative practices must –
 - (a) be clear and generally available to those affected thereby;
 - (b) in addition to serving as regulatory measures, also provide guidance and information to those affected thereby.
- [7] The identification, assessment and management of the heritage resources of South Africa must –
 - (d) contribute to social and economic development.

An uninformative and non-transparent administrative processes and procedures, between the NBYKB and SAHRA but with specific reference to the SAHRA – project proponent relationship, with cognisance to recorded attempts by the developer to contact and consult with SAHRA regarding the development have resulted in unnecessary and undefined time delays regarding decision making with resultant direct negative impact on the economic viability of the project.

Reported on, and additionally inferred, consultation with 3rd parties *in lieu* of direct consultation with the developer may be ascribed to 'conviction', by the public and heritage professionals, but more importantly the heritage compliance arena, NBYKB and SAHRA, of hypothesized site locale of the inferred 'Black' migrant worker cemetery. Statements such as: *'The site in question is said to be 100% cemetery, 1870's African burial ground in Kimberley North... recommended for heritage site declaration in 2004'* (NBYKB 2014) and more importantly *'It is therefore required that a new heritage report should be commissioned that would focus on the impact of the warehouse extension on the historical cemetery'* (SAHRA 2015a), may well underlie the perceived avoidance by SAHRA to have employed management strategies; transparent consultation with the project proponent, timeous comment with reference to stipulated time frames in the NBYKB 'Cease Work Order' and archaeological testing to verify the inferred resource in question as recommended by Gaigher (2014), and as provided for in the NHRA 1999 Section 35(5), in order to directly assist in responsible decision making.

'Conviction' and consultation with 3rd parties, *in lieu* of direct consultation with the developer and the avoidance of management strategies focusing on site verification for purposes of responsible decision making raise questions with regards to SAHRA / BKYKB (and possible 3rd party) principles of 'good governance' versus distribution of, or association with the distribution of false or uncertain information. The NHRA 1999 Section 51 state:

- [5] Any person who –

(b) for the purpose of obtaining, whether for himself or herself or for any other person, any permit, consent or authority in terms of this Act, makes any statement or representation knowing it to be false or not knowing or believing it to be true

Shall be guilty of an offence and upon conviction shall be liable to such maximum penalties, in the form of a fine or imprisonment or both such fine and such imprisonment, as shall be specified in the regulations under subsection (3).

It is necessary to again consider the inferred heritage research or conservation proposal at Erf 44500. The NHRA 1999 Section 42 states:

[1] (a) SAHRA, or a provincial heritage resources authority may negotiate and agree with a provincial authority, local authority, conservation body, person, or community for the execution of a heritage agreement to provide for the conservation, improvement or presentation of a clearly defined heritage resource: provided that the consent of the owner of such resource must be given.

Of note in the NHRA 1999, Section (42)(1)(a), is again the emphasis on verification of a site or resource, but more importantly the reiteration of consultation with, and consent by the owner, in the event of a heritage agreement affecting either conservation or investigation of a resource. Statements (and mannerisms) by heritage and academic professionals, from both the McGregor Museum and the Sol Plaatje University insinuated a research proposal on the inferred 'Black' migrant worker cemetery. The Volksblad statement on 23 January 2015 confirmed a 'conservation agreement', albeit perhaps fairly informal in nature, directly consulted between the Volksblad, 'SAHRA and other authorities and institutions'. The no response by SAHRA on a letter (26 February 2015) requesting information on heritage site declaration and research proposals affecting the Erf 44500 property remain a potential further concern.

* * *

In conclusion, an uninformative, non-transparent and non-compliant (with specific reference to the 14 day NBYKB 'Cease Work Order' stipulation for comment upon compliance with requirements as stipulated in the order), heritage compliance process on behalf of the NBYKB and SAHRA have resulted in unnecessary and undefined time delays regarding decision making with resultant direct negative impact on the economic viability of the *Samy's Wholesalers Extension*, Erf 44500, development.

Direct financial implications of the heritage compliance process concerns on behalf of the developer set aside for purposes of this report; process concerns are not limited to Pillay as investor in the 'Residential Densification' area. Concerns raised by the Sol Plaatje Municipality with respect to land management and planning and by the general business community prior to 'Heritage Consultation', 26 January 2015, will come with long term negative impact, with reference to both planning and investment in Kimberley's development.

Comments contained in this section should not be misinterpreted. It is the mandatory responsibility of SAHRA, and in the Northern Cape the NBYKB, to protect and manage the heritage of South Africa. In accordance with legislative requirements (NHRA 1999) it is the responsibility of a developer to ensure that compliance requirements are met. However, the question remains: 'Is a developer financially responsible for the cost of "mismanagement"?' Principles of 'good governance' amongst various State departments at various levels are necessary to promote responsible development, not only with reference to direct heritage concerns but also with reference to the inherent responsibility in heritage management to contribute to economic development. Principles of integrated management are increasingly emphasised in planning and development projects – Consultation, communication and transparency always key elements! The emphasis on 'good governance' and good management cannot be overstated in the development and investment arena, with development in South Africa directly dependant on public, but very importantly also private investment.

The primary concern in the case of the *Samy's Wholesalers Extension*, Erf 44500, Kimberley, remain non-compliance by NBYKB and SAHRA with regards to the stipulated time frame of a 14 day period for decision making by the NBYKB Permit Committee and a comment by SAHRA upon compliance with requirements as stipulated in the NBYKB 'Cease Work Order'.

3.2.1) **Samy's Wholesalers Extension development, Erf 44500, Kimberley, Northern Cape**

1. It is proposed that the Erf 44500 study site and surrounds comprised part of an early Black residential area. GPR scan results verify the study site in question as not forming part of the DN 1879 reported on 'Black' migrant worker cemetery. It is recommended that development proceeds as applied for without the developer having to comply with additional SAHRA / NBYKB compliance requirements:
 - Development will not impact on any identified graves.
 - Feature H (S28°43'52.7"; E24°45'56.8"), remains of a 1940's floor slab, conforms to recorded evidence of a residence situated on Erf 7542. Remains pre-date 60 years of age. The structure was demolished during the 1980's development of Quinn Street. Floor slab remains of the demolished structure are of no historical architectural significance. It is recommended that development proceed without the developer having to apply for a NBYKB site destruction permit.
2. It is requested that the NBYKB revokes the NBYKB 'Cease Work Order' issued to the project proponent on 16 October 2014. A digital copy of the withdrawal should be forwarded to ArchaeoMaps (e-mail: kvanryneveld@gmail.com), to reach the ArchaeoMaps offices no later than close of business day (16:00), 20 February 2015. The original document should be forwarded to: Tom Pillay, P&V Family Trust, P.O. Box 3109, Kimberley, 8300 (courier or registered post).
3. It is requested that SAHRA revokes the SAHRA 'Cease Work Order' issued to the project proponent on 6 February 2015. A digital copy of the withdrawal should be forwarded to ArchaeoMaps (e-mail: kvanryneveld@gmail.com), to reach the ArchaeoMaps offices no later than close of business day (16:00), 20 February 2015. The original document should be forwarded to: Tom Pillay, P&V Family Trust, P.O. Box 3109, Kimberley, 8300 (courier or registered post).
4. It is requested that SAHRA issue a positive Heritage Impact Assessment (HIA) Comment, based on the findings of the Archaeological and Cultural Heritage Impact Assessment (AIA) as contained in this report, no later than close of business day (16:00), 27 February 2015.

[With cognizance to concerns raised with respect to 'conviction' and implied effect of the results of this study on possible conservation and research proposals, SAHRA, the NBYKB or any third party wishing to conduct tests (or inspections) to verify the heritage status quo of the study site in question is requested to consult directly with ArchaeoMaps. Test proposals by third parties not affecting the above time frame requirements for a SAHRA HIA Comment will be considered, if and where applicable in direct consultation with SAHRA / the NBYKB. Any test shall be to the cost of the party proposing the test / inspection.]

4 - Acronyms and Abbreviations

AD	: Anno Domini (the year 0.)
AIA	: Archaeological Impact Assessment
AMAFA	: Amafa aKwaZulu-Natali
ASAPA	: Association of Southern African Professional Archaeologists
BAR	: Basic Assessment Report
BC	: Before the Birth of Christ (the year 0.)
BCE	: Before the Common Era (the year 0.)
BIA	: Basic Impact Assessment
BID	: Background Information Document
BP	: Before the Present (the year 1950.)
cm	: Centimeter
CRM	: Cultural Resources Management
DAC	: Department of Arts and Culture
DEAT	: Department of Environmental Affairs and Tourism
DEDEAT	: Department of Economic Development, Environmental Affairs and Tourism
DME	: Department of Minerals and Energy
DSACR	: Department of Sport, Arts, Culture and Recreation
ECO	: Environmental Control Officer
EAP	: Environmental Assessment Practitioner
EC PHRA	: Eastern Cape Provincial Heritage Resources Authority
EIA	: Environmental Impact Assessment
EIA ₁	: Early Iron Age
EMPr	: Environmental Management Plan report
ESA	: Earlier Stone Age
ha	: Hectare
HIA	: Heritage Impact Assessment
HWC	: Heritage Western Cape
HCMP	: Heritage Conservation Management Plan
ICOMOS	: International Council on Monuments and Sites
IEM	: Integrated Environmental Management
km	: Kilometer
Kya	: Thousands of years ago
LIA	: Later Iron Age
LSA	: Later Stone Age
m	: Meter
m ²	: Square Meter
MIA	: Middle Iron Age
mm	: Millimeter
MPRDA (2002)	: Mineral and Petroleum Resources Development Act, No 28 of 2002
MSA	: Middle Stone Age
Mya	: Millions of years ago
NEMA (1998)	: National Environmental Management Act, No 107 of 1998
NHRA (1999)	: National Heritage Resources Act, No 25 of 1999
PIA	: Palaeontological Impact Assessment
PHRA	: Provincial Heritage Resources Authority
PSSA	: Palaeontological Society of South Africa
PPP	: Public Participation Process
SAHRA	: South African Heritage Resources Agency
SAHRIS	: South African Heritage Resources Information System
SciA	: Socio-cultural Impact Assessment
SIA	: Social Impact Assessment

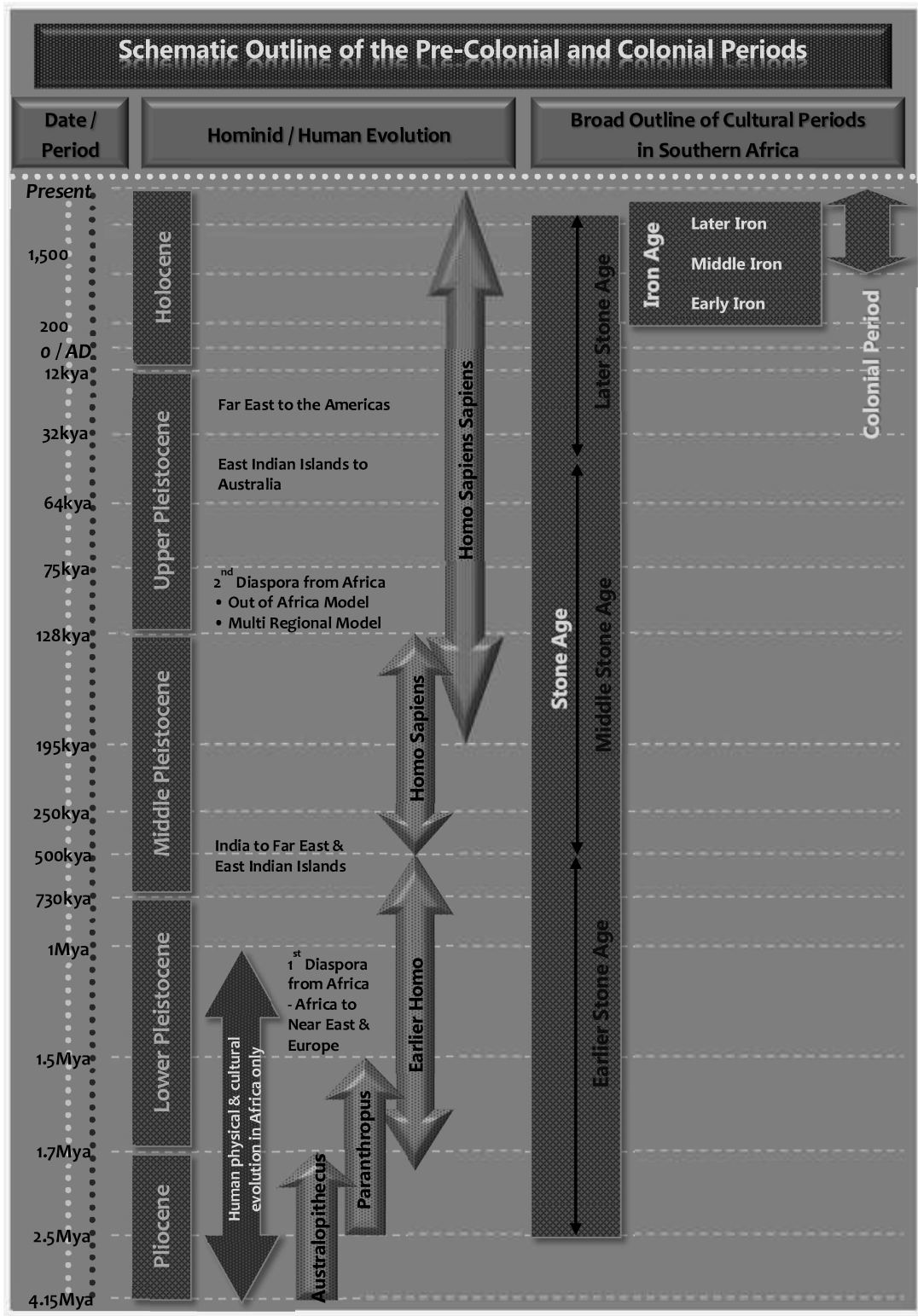
5 - References

1. Beaumont, P.B. (McGregor Museum). 2007. *Phase 1 Heritage Impact Assessment Report on Parts of Portion 2 and the Remainder of the Farm Holsdam 229 near Barkley-West, Frances Baard District Municipality, Northern Cape Province.*
2. Becker, E. (Envass). 2011. *Archaeological Impact Assessment Technical Report Prepared for !Xun and Khwe – !Xun and Khwe Solar Farm.*
3. Becker, E. (Hatch). 2013. *Transnet Capital Projects. Ngqura 16 MTPA Manganese Rail. Phase 1 Heritage Impact Assessment – Rail, Kimberley to De Aar.*
4. Chazan, M., Porat, N., Sumner, T.A. & Horwitz, L.K. 2013. *The Use of OSL Dating in Unstructured Sands: The Archaeology and Chronology of the Hutton Sands at Canteen Kopje, Northern Cape Province, South Africa.* Archaeol Anthropol Sci DCI 10/1007/s 12520-013-0118-7.
5. De Jong. (Private). 2010. *Heritage Impact Assessment Report: Proposed Manganese Iron Ore Mining Right Application in Respect of the Remainder of the Farm Paling 434, Hay Registration Division. Northern Cape.*
6. Diamond News. 1979.
7. en.wikipedia.org/wiki/Barney_Bernato.
8. en.wikipedia.org/wiki/Kimberley_Northern_Cape
9. en.wikipedia.org/wiki/User:Firefishy/SA_Rail/History.
10. Gaigher, S. (G&A Heritage). 2014. *Heritage Impact Assessment Report for the Proposed Expansion of the Samy's Wholesalers Warehouse, Kimberley – Northern Cape Province.*
11. Giliomee, H. & Mbenga, B. 2007. *New History of South Africa.* Cape Town: Tafelberg Publishers.
12. Huffman, T.N. 2007. *Handbook to the Iron Age. The Archaeology of Pre-Colonial farming Societies in South Africa.* Scottsville: University of Kwa-Zulu Natal Press.
13. Mabin, A. 1986. *Labour, Capital, Class Struggle and the Origins of Residential Segregation in Kimberley, 1880-1920.* Journal of Historical Geography 12(1): 4-26
14. Metropolitan Planning Section, City Planning Division – City of Tshwane & Department of Urban and Regional Planning, University of Pretoria (Tshwane). 2005. *City of Tshwane Compaction and Densification Strategy.*
15. Mitchell, P. 2002. *The Archaeology of Southern Africa.* Cambridge: Cambridge University Press
16. Morris, D. 1990. *Dithakong: 'The Place of Ruins'.* In (eds) Beaumont, P.B. & Morris, D. *Guide to the Archaeological Sites of the Northern Cape.* Kimberley: McGregor Museum.
17. Morris, D. (McGregor Museum). 2001. *Report on Historical Rubbish Midden at Kamfersdam.*
18. Morris, D. (McGregor Museum). 2003. *Archaeological Survey of the Farm Koodoosberg No 141.*
19. Morris, D. (McGregor Museum). 2004. *Skeletons found at 78 Transvaal Road, Kimberley, report to SAHRA – Permit 80/04/04/005/51.*
20. Morris, D. (McGregor Museum). 2005b. *Phase 1 Archaeological Impact Assessment for De Beers Consolidated Mines Ltd (Contract 0616-AC-244-05) to Evaluate Heritage Resources on Properties as Indicated.*
21. Morris, D. (McGregor Museum). 2005c. *Phase 1 Archaeological Impact Assessment of the so-called 'Kemo-Dump' (National Site Number 2824DB039) on Remainder of Erf 5024, Erf 6376 and Erf 5058, Vooruitzicht 81, Kimberley, Northern Cape.*

22. Morris, D. (McGregor Museum). 2005d. *Site Visit to Inspect Cultural Material on Mine Debris Dumps Adjacent to the Kimberley Mine at the Site of the Proposed Hotel*.
23. Morris, D. (McGregor Museum). 2006. *Report on a Phase 1 Archaeological Impact Assessment of a Proposed Clay Quarry at Roodepan 70, Kimberley, Northern Cape (30/5/1/3/3/2/1/358EM)*.
24. Morris, D. (McGregor Museum). 2014. *Proposed Boundary Solar Energy Facility on the Farm Karreeboom 1716, East of Kimberley, in the Tokologo Local Municipality, Free State: Heritage Impact Assessment*.
25. Morris, D., Van Ryneveld, K. & Voigt, E. 2004. *Outside Gladstone Cemetery: First Thoughts on Unmarked Late Nineteenth Century Graves, Kimberley*. In Morris, D. & Beaumont, P.B. (eds) *Archaeology in the Northern Cape: Some Key Sites*. McGregor Museum: Kimberley. Pp 64-66
26. NBYKB. 2014. Cease Work Order.
27. Nel, J. (Archaic Heritage). 2008. *Final Report: Heritage Resources Scoping Survey and Preliminary Assessment of Transnet Freight Line EIA, Eastern Cape and Northern Cape*.
28. Setplan. 2008. *Densification Framework – Status Quo: Analysis and Findings Document – Ekurhuleni Metropolitan Municipality*.
29. Smith, P., Nshimirimana, R., De Beer, F., Morris, D., Jacobson, L., Chazan, M. & Horwitz. 2012. Canteen Kopje: A New Look at an Old Skull. *South African Journal of Science*. 2012(108): 1-9.
30. Sol Plaatje Municipality. 2008. *Spatial Development Framework (SDF) 2008-2012*.
31. South African Government. (No. 25 of) 1999. *National Heritage Resources Act*.
32. South African Heritage Resources Agency. 2007. *Minimum Standards for the Archaeological and Heritage Components of Impact Assessments*. (Unpublished guidelines.)
33. South African Heritage Resources Agency. 2013a. *The South African Heritage Resources Agency Information System (SAHRIS) Policy*.
34. South African Heritage Resources Agency. 2013b. *SAHRIS Service Level Agreement*.
35. South African Heritage Resources Agency. 2015a. RE: *Departure from SAHRA APM Unit Recommendation Requirements (not issued to date) and Entreaty for Development to Proceed with Conditions*.
36. South African Heritage Resources Agency. 2015b. *SAHRA Interim Comment. SAHRIS CaseID 6899*.
37. South African Heritage Resources Agency. 2015c. *SAHRA Cease Work Order*
38. Spatial Planning and Urban Design Department, City of Cape Town (CPT). 2009. *City Space – Planning Cape Town: Cape Town Densification Strategy – Executive Summary*.
39. Van Ryneveld, K. (McGregor Museum). 2006. *Phase 1 Archaeological Impact Assessment – Erf 49, Erf 687 and Commonage Erf 687, Barkley-West District, Northern Cape, South Africa*.
40. Van Ryneveld, K. (National Museum Bloemfontein). 2007. *Phase 1 Archaeological Impact Assessment – Portion of the Farm Platfontein 68, Kimberley District, Northern Cape, South Africa*.
41. Van Ryneveld, K. (ArchaeoMaps). 2012. *Phase 1 Archaeological Impact Assessment - !Xun and Khwe Solar Project, Platfontein 68, Sol Plaatje Municipality, Northern Cape, South Africa*.
42. Van Ryneveld, K. (ArchaeoMaps). 2014a. *SAHRIS CaseID 6899 – Samy's Wholesalers Extension, Erf 44500, c/o Quinn & Lawrence Streets, Kimberley, Sol Plaatje Municipality, Northern Cape. RE: Departure from SAHRA APM Unit Recommendation Requirements (not issued to date) and Entreaty for Development to Proceed with Conditions*.

43. Van Ryneveld, K. (ArchaeoMaps). 2014b. SAHRIS CaseID 6899 – *Samy's Wholesalers Extension, Erf 44500, c/o Quinn & Lawrence Streets, Kimberley, Sol Plaatje Municipality, Northern Cape. RE: Departure from SAHRA APM Unit Recommendation Requirements (not issued to date) and Notification of Development to Proceed with Conditions.*
44. Van Ryneveld, K. (ArchaeoMaps). 2014a. SAHRIS CaseID 6899 – *Samy's Wholesalers Extension, Erf 44500, c/o Quinn & Lawrence Streets, Kimberley, Sol Plaatje Municipality, Northern Cape. RE: Report on Vandalism of Erf 44500, Kimberley, on Evening of 15 January 2015.*
45. www.wildebeestkuil.itgo.caw.

Appendix A:



Appendix B:

Introduction to the Archaeology of South Africa

Archaeologically the southern African cultural environment is roughly divided into the Stone Age, the Iron Age and the Colonial Period, including its subsequent Industrial component. This cultural division has a rough temporal association beginning with the Stone Age, followed by the Iron Age and the Colonial Period. The division is based on the identified primary technology used. The hunter-gatherer lifestyle of the Stone Age is identified in the archaeological record through stone being the primary raw material used to produce tools. Iron Age people, known for their skill to work iron and other metal, also practiced agriculture and animal husbandry. Kingdoms and civilizations associated with the Iron Age are indicative of a complex social hierarchy. The Colonial Period is marked by the advent of writing, in southern Africa primarily associated with the first European travelers (Mitchell 2002).

During the latter part of the Later Stone Age (LSA) hunter-gatherers shared their cultural landscape with both pastoralists and Iron Age people, while the advent of the Colonial Period in South Africa is marked by a complex cultural mosaic of people; including LSA hunter-gatherers, pastoralists, Later Iron Age farming communities and Colonial occupation.

1) Early Hominin Evolution

DNA studies indicate that humans and chimpanzees shared a common ancestor between 6-8Mya (Sibley & Ahlquist 1984). By 4Mya, based on fossil evidence from Ethiopia and Kenya, hominins (humans and their immediate fossil ancestors and relatives) had already evolved. The earliest fossils are ascribed to *Ardipithecus ramidus* (4.4Mya), succeeded by *Australopithecus anamensis* (4.2-3.9Mya). These fossils are inferred to lie at the base from which all other hominins evolved (Leakey et al. 1995; White et al. 1994).

In South Africa the later hominins are classed into 3 groups or distinct genera; *Australopithecus* (gracile australopithecines), *Paranthropus* (robust australopithecines) and *Homo*. South Africa has 3 major hominin sites: Taung in the North-West Province, where Raymond Dart identified the first *Australopithecus* fossil in 1924 (Dart 1925); The Cradle of Humankind (Sterkfontein Valley) sites in Gauteng, the most prolific hominin locality in the world for the period dating 3.5-1.5Mya which have yielded numerous *Australopithecus*, *Paranthropus* and limited *Homo* fossils (Keyser et al. 2000; Tobias 2000); and Makapansgat in the Limpopo Province, where several more specimens believed to be older than most of the Cradle specimens were discovered (Klein 1999).

A. africanus, represented at all 3 sites are believed to have been present on the South African landscape from about 3Mya. From approximately 2.8Mya they shared, at least in the Cradle area, the landscape with *P. robustus* and from roughly 2.3Mya with early forms of *Homo* (Clarke 1999). Global climatic cooling around 2.5Mya may have stimulated a burst of species turnover amongst hominins (Vrba 1992); the approximate contemporary appearance of the first stone tools suggests that this was a critical stage in human evolution. But exactly which early hominin population is to be accredited as the ancestor of *Homo* remains elusive.

H. ergaster is present in the African palaeo-anthropological record from around 1.8Mya and shortly thereafter the first exodus from Africa is evidenced by *H. erectus* specimens from China, Indonesia and even Europe (Klein 1999).

2) The Stone Age

2.1) The Earlier Stone Age

In South Africa the only Earlier Stone Age (ESA) Oldowan lithic assemblage comes from Sterkfontein Cave. The predominant quartz assemblage is technologically very simple, highly informal and inferred to comprise exclusively of multi-purpose tools (Kuman et al. 1997). The latter part of the ESA is characterized by the Acheulean Industrial Complex, present in the archaeological record from at least 1.5Mya. Both *H. ergaster* and *P. robustus* may be accredited with the production of these tools. The association between stone tools and increased access to meat and marrow supporting the greater dietary breadth of *Homo* may have been vital to *Homo*'s evolutionary success; and the eventual extinction of the robust australopithecines (Klein 1999).

Probably the longest lasting artefact tradition ever created by hominins, the Acheulean is found from Cape Town to north-western Europe and India, occurring widely in South Africa. Despite the many sites it is still considered a 'prehistoric dark age' by many archaeologists, encompassing one of the most critical periods in human evolution; the transition from *H. ergaster* to archaic forms of *H. Sapiens* (Klein 1999).

The Acheulean industry is characterized by handaxes and cleavers as *fosilles directeurs* (signatory artefact types), in association with cores and flakes. Handaxes and cleavers were multi-purpose tools used to work both meat and plant matter (Binneman & Beaumont 1992). Later Acheulean flaking techniques involved a degree of core preparation that allowed a single large flake of predetermined shape and size to be produced. This *Victoria West technique* indicates an origin within the Acheulean for the *Levallois technique* of the Middle Stone Age (Noble & Davidson 1966). The lithic artefact component was supplemented by wood and other organic material (Deacon 1970).

2.2) The Middle Stone Age

The Middle Stone Age (MSA), dating from approximately 500kya to 40-27/23kya is interpreted as an intermediate technology between the Acheulean and the Later Stone Age (LSA) (Goodwin & van Riet Lowe 1929). The MSA is typologically characterized by the absence of handaxes and cleavers, the use of prepared core techniques and the production of blades, triangular and convergent flakes, with convergent dorsal scars and faceted striking platforms, often produced by means of the *Levallois technique* (Volman 1984). The widespread occurrence of MSA technology across Africa and its spread into much of Eurasia in Oxygen Isotope Stage (OIS) 7 is viewed as part of a process of population dispersal associated with both the ancestors of the later Neanderthals in Europe and anatomically modern humans in Africa (Foley & Lahr 1997).

After the riches offered by the Cradle sites and Makapansgat, southern Africa's Middle Pleistocene fossil record is comparatively poor. Early Middle Pleistocene fossil evidence suggests an archaic appearance and fossils are often assigned to *H. heidelbergensis* and *H. sapiens rhodesiensis* (Rightmire 1976). Modern looking remains, primarily from Border Cave (KwaZulu-Natal) and Klasies River Mouth (Eastern Cape) raised the possibility that anatomically modern humans had, by 120kya, originated south of the Sahara before spreading to other parts of the world (Brauer 1982; Stringer 1985). Subsequent studies of modern DNA indicated that African populations are genetically more diverse and probably older than those elsewhere (Cann *et al.* 1994). Combined, the fossil and genetic evidence underpins the so-called *Out of Africa 2* model (arguing that gene flow and natural selection led regional hominin populations along distinct evolutionary trajectories after *Homo*'s expansion from Africa in the Lower Pleistocene *Out of Africa 1* model) of modern human origins and the continuing debate as to whether it should be preferred to its *Multiregional* alternative (arguing that modern humans evolved more or less simultaneously right across the Old World) (Mellars & Stringer 1989; Aitken *et al.* 1993; Nitecki & Nitecki 1994).

Persuasive evidence of ritual activity or bodily decoration is evidenced by the widespread presence of red ochre at particularly MSA 2 sites (after Volman's 1984 MSA 1-4 model; Hensilwood & Sealy 1997), while evidence from Lion Cave, Swaziland, indicates that specularite may have been mined as early as 100kya (Beaumont 1973). Evidence for symbolic behavioral activity is largely absent; no evidence for rock art or formal burial practices exists.

2.3) The Later Stone Age

Artefacts characteristic of the Later Stone Age (LSA) appear in the archaeological record from 40/27-23kya and incorporates microlithic as well as macrolithic assemblages. Artefacts were produced by modern *H. sapien* or *H. sapien sapien*, who subsisted on a hunter-gatherer way of life (Deacon 1984; Mitchell 2002).

According to Deacon (1984) the LSA can temporally be divided into 4 broad units directly associated with climatic, technological and subsistence changes:

1. Late Pleistocene microlithic assemblages (40-12kya);
2. Terminal Pleistocene / early Holocene non-microlithic assemblages (12-8kya);
3. Holocene microlithic assemblages (8kya to the Historic Period); and
4. Holocene assemblages with pottery (2kya to the Historic Period) closely associated with the influx of pastoralist communities into South Africa (Mitchell 2002).

Elements of material culture characteristic of the LSA reflect modern behavior. Deacon (1984) summarizes these as:

1. Symbolic and representational art (paintings and engravings);
2. Items of personal adornment such as decorated ostrich eggshell, decorated bone tools and beads, pendants and amulets of ostrich eggshell, marine and freshwater shells;
3. Specialized hunting and fishing equipment in the form of bows and arrows, fish hooks and sinkers;
4. A greater variety of specialized tools including bone needles and awls and bone skin-working tools;
5. Specialized food gathering tools and containers such as bored stone digging stick weights, carrying bags of leather and netting, ostrich eggshell water containers, tortoiseshell bowls and scoops and later pottery and stone bowls;
6. Formal burial of the dead in graves (sometimes covered with painted stones or grindstones and accompanied by grave goods);
7. The miniaturization of selected stone tools linked to the practice of hafting for composite tools production; and
8. A characteristic range of specialized tools designed for making some of the items listed above.

➤ Rock Art

Rock Art is one of the most visible and informative components of South Africa's archaeological record. Research into LSA ethnography (as KhoiSan history) has revolutionized our understanding of both painted and engraved (petroglyph) images, resulting in a paradigm shift in Stone Age archaeology (Deacon & Dowson 2001). Paintings are concentrated in the Drakensberg / Maluti mountains, the eastern Free State, the Cape Fold Mountains, the Waterberg Plateau and the Soutpansberg mountains. Engravings on the other hand are found throughout the Karoo, the western Free State and North-West Province (Mitchell 2002). Both forms of LSA art drew upon a common stock of motifs, derived from widely shared beliefs and include a restricted range of naturalistically depicted animals, geometric imagery, human body postures and non-realistic combinations of human and animal figures (anthropomorphic figurines). LSA Rock Art is closely associated with spiritual or magical significance (Lewis-Williams & Dowson 1999).

Aside from LSA or KhoiSan Rock Art, thus art produced by both hunter-gatherer and pastoralist and agro-pastoralist groups, Rock Art produced by Iron Age populations are known to be present towards the north of the country.

➤ Shell Middens ('Strandloper' Cultures)

South Africa's nearly 3,000km coastline is dotted by thousands of shell middens, situated between the high water mark and approximately 5km inland, bearing witness to long-term exploitation of shellfish mainly over the past 12,000 years. These LSA shell middens are easily distinguishable from natural accumulations of shells and deposits can include bones of animals eaten such as shellfish, turtles and seabirds, crustaceans like crabs and crayfish and marine mammal remains of seals, dolphins and occasionally whales. Artefacts and hearth and cooking remains are often found in shell midden deposits. Evidence exists that fish were speared, collected by hand, reed baskets and by means of stone fish traps in tidal pools (Mitchell 2002).

Shell midden remains were in the past erroneously assigned to 'Strandloper cultures'. Deacon & Deacon (1999) explain that 'no biological or cultural group had exclusive rights to coastal resources.' Some LSA groups visited the coast periodically while others stayed year round and it is misleading to call them all by the same name. Two primary sources of archaeological enquiry serves to shed more light on the lifestyles of people who accumulated shell middens, one being the analysis of food remains in the middens itself and the other being the analysis of LSA human skeletal remains of people buried either in shell middens or within reasonable proximity to the coast.

Shell middens vary in character ranging from large sites tens of meters in extent and with considerable depositional depth to fairly small ephemeral collections, easily exposed and destroyed by shifting dune action. Shell middens are also found inland, along rivers where fresh water mussels occur. These middens are often fairly small and less common; in the Eastern Cape often dated to within the past 3,000 years (Deacon & Deacon 1999).

In addition shell middens are not exclusively assigned to LSA cultures; shellfish were exploited during the Last Interglacial, indicating that the practice was most probably continuous for the past 120,000 years (MSA shell middens). Along the coast of KwaZulu-Natal evidence exist for the exploitation of marine food resources by Iron Age communities. These shell middens are easily distinguished from Stone Age middens by particularly rich, often decorated ceramic artefact content. Colonial Period shell middens are quite rare and extremely ephemeral in character; primarily the result of European shipwreck survivors and reported on along the coast of KwaZulu-Natal and the Transkei, Eastern Cape.

3) The Iron Age

For close to 2 millennia people combining cereal agriculture with stock keeping have occupied most of southern Africa's summer rainfall zone. The rapid spread of farming, distinctive ceramics and metallurgy is understood as the expansion of a Bantu-speaking population, in archaeological terms referred to as the Iron Age.

3.1) The Early Iron Age

Ceramic typology is central to current discussions of the expansion of iron using farming communities. The most widely used approach is that of Huffman (1980), who employs a multidimensional analysis (vessel profile, decoration layout and motif) to reconstruct different ceramic types. Huffman (1998) argues that ceramics can be used to trace the movements of people, though not necessarily of specific social or political groupings. Huffman's Urewe Tradition coincides largely with Phillipson's (1977) Eastern Stream. A combined Urewe Tradition / Eastern Stream model for the Early Iron Age can be summarized as:

1. The Kwale branch (extending along the coast from Kenya to KwaZulu-Natal);
2. The Nkope branch (located inland and reaching from southern Tanzania through Malawi and eastern Zambia into Zimbabwe); and
3. The Kalundu branch (stretching from Angola through western Zambia, Botswana and Zimbabwe into South Africa).

In southern Africa, recent work distinguishes two phases of the Kwale branch: The earlier Silver Leaves facies (250-430AD) occurring as far south as the Northern Province. The later expression or Mzonjani facies (420-580AD) occurs in the Northern Province as well as along the KwaZulu-Natal coastal belt (Huffman 1998). Since the Silver Leaves facies is only slightly younger than the Kwale type site in Kenya, very rapid movement along the coast, perhaps partly by boat, is inferred (Klapwijk 1974). Subsequently (550-650AD) people making Mzonjani derived ceramics settled more widely in the interior of South Africa.

Assemblages attributable to the Nkope branch appear south of the Zambezi but north of South Africa from the 5th Century. Ziwa represents an early facies, with Gokomere deriving jointly from Ziwa and Bambata. A subsequent phase is represented by the Zhizo facies of the Shashe-Limpopo basin, and by Taukome (Huffman 1994). Related sites occur in the Kruger National Park (Meyer 1988). Zhizo (7th – 10th Century) is ancestral to the Toutswe tradition which persisted in eastern Botswana into the 13th Century.

Kalundu origins need further investigation; its subsequent development is however better understood. A post Bambata phase is represented by the 5th – 7th Century sites of Happy Rest, Klein Africa and Maunatlana in the Northern Province and Mpumalanga (Prinsloo 1974, 1989). Later phases are present at the Lydenburg Heads site (Whitelaw & Moon 1996) and by the succession of Mzuluzi, Ndondonwane and Ntshekane in KwaZulu-Natal (7th – 10th Centuries) (Prins & Grainger 1993). Later Kalundu facies include Klingbeil and Eiland in the northern part of the country (Evers 1980) with Kgopolwe being a lowveld variant in Mpumalanga (10th – 12th Century). Broadhurst and other sites indicate a still later survival in Botswana (Campbell 1991).

Despite the importance accorded to iron agricultural implements in expanding the spread of farming and frequent finds of production debris, metal objects are rare. Metal techniques were simple, with no particular sign of casting, wire drawing or hot working. Jewelry (bangles, beads, pendants etc.) constitute by far the largest number of finds but arrows, adzes, chisels, points and spatulae are known (Miller 1996).

Early Iron Age people were limited to the Miombo and Savannah biomes; excluded from much of the continent's western half by aridity and confined in the south during the 1st millennium to bushveld areas of the old Transvaal. Declining summer rainfall restricted occupation to a diminishing belt close to the East Coast and north of S33 (Maggs 1994); sites such as Canasta Place (800AD), Eastern Cape, mark the southern-most limit of Early Iron Age settlement (Nogwaza 1994).

➤ The Central Cattle Pattern

The Central Cattle Pattern (CCP) was the main cognitive pattern since the Early Iron Age (Huffman 1986). The system can be summarized as opposition between male pastoralism and female agriculture; ancestors and descendants; rulers and subjects; and men and women. Cattle served as the primary means of transaction; they represented symbols exchanged for the fertility of wives, legitimacy of children and appeasement of ancestors. Cattle were also used as tribute to rulers confirming subordination and redistribution as loan cattle by the ruler to gain political support. Cattle represented healing and fertilizing qualities (Huffman 1998; Kuper 1980).

This cognitive and conceptual structure underlies all cultural behavior, including the placement of features in a settlement. The oppositions of male and female, pastoralism and agriculture, ancestors and descendants, rulers and subjects, cool and hot are represented in spatial oppositions, either concentric or diametric (Huffman 1986).

A typical CCP village comprise of a central cattle enclosure (byre) where men are buried. The Kgotla (men's meeting place / court) is situated adjacent to the cattle enclosure. Surrounding the enclosure is an arc of houses, occupied according to seniority. Around the outer perimeter of the houses is an arc of granaries where women keep their pots and grinding stones (Huffman 1986). The model varies per ethnic group which helps to distinguish ethnicity throughout the Iron Age, but more studies are required to recognize the patterns.

3.2) The Middle Iron Age

The hiatus of South African Middle Iron Age activity was centered in the Shashe-Limpopo Valley and characterized by the 5-tier hierarchical Mapungubwe State spanning some 30,000km². By the 1st millennium ivory and skins were already exported overseas, with sites like Sofala and Chibueni, Mozambique, interfacing between interior and transoceanic traders. Exotic glass beads, cloth and Middle Eastern ceramics present at southern African sites mark the beginning of the regions incorporation into the expanding economic system that, partly tied together with maritime trading links across the Indian Ocean, increasingly united Africa, Asia and Europe long before Da Gama or Columbus (Eloff & Meyer 1981; Meyer 1998).

Occupation was initially focused at Bambandanyalo and K2. The Bambandanyalo main midden (1030-1220AD) stands out above the surrounding area, reaching more than 6m in places and covering more than 8ha the site may have housed as many as 2,000 people (Meyer 1998). The CCP was not strictly followed; whether this is ideologically significant or merely a reflection of local typography remains unclear. The midden, the size of which may reflect the status of the settlement's ruler, engulfed the byre around 1060-1080AD, necessitating relocation of the cattle previously kept there. The re-organization of space and worldview implied suggests profound social changes even before the sites' abandonment in the early 13th century, when the focus of occupation moved to Mapungubwe Hill, 1 km away (Huffman 1998).

Excavations at Mapungubwe Hill, though only occupied for a few decades (1220-1290AD), yielded a deep succession of gravel floors and house debris (Eloff & Meyer 1981). Huffman (1998) suggests that the suddenness with which Mapungubwe was occupied may imply a deliberate decision to give spatial expression to a new social order in which leaders physically removed themselves from ordinary people by moving onto more inaccessible, higher elevations behind the stone walls demarcating elite residential areas. Social and settlement changes speak of considerable centralization of power and perhaps the elaboration of new ways of linking leaders and subjects.

At Bambandanyalo and Mapungubwe elite burial grave goods include copper, bone, ivory and golden ornaments and beads. Social significance of cattle is reinforced by their importance among the many human and animal ceramic figurines and at least 6 'beast burials' (Meyer 1998).

Today the drought prone Shashe-Limpopo Valley receives less than 350mm of rainfall per annum, making cereal cultivation virtually impossible. The shift to drier conditions in the late 1200's across the Shashe-Limpopo basin and the eastern Kalahari may have been pivotal in the break-up of the Mapungubwe polity, the collapse of Botswana's Toutswe tradition and the emergence of Great Zimbabwe (1220-1550AD), southern Africa's best known and largest (720ha) archaeological site (Meyer 1998).

South of the Limpopo and north of the Soutpansberg, Mapungubwe derived communities survived into the 14th Century, contemporary with the establishment of Sotho-speaking makers of Maloko pottery.

3.3) The Later Iron Age

South African farming communities of the 2nd millennium experienced increased specialization of production and exchange, the development of more nucleated settlement patterns and growing political centralization, albeit not to the same extent as those participating in the Zimbabwe tradition. However, together they form the background to the cataclysmic events of the late 18th / early 19th Century *Mfecane* (Mitchell 2002).

Archaeological evidence of settlement pattern, social organization and ritual practice often differ from those recorded ethnographically. The Moloko ceramic tradition seems to be ancestral to modern Sotho-Tswana speakers (Evers 1980) and from about 1,100AD a second tradition, the Blackburn tradition, appears along South Africa's eastern coastline. Blackburn produced mostly undecorated pottery (Davies 1971), while Mpambanyoni assemblages, reaching as far south as Transkei, includes examples of rim notching, incised lines and burnished ochre slip (Robey 1980). At present, no contemporary farming sites are known further inland in KwaZulu-Natal or the Eastern Cape.

Huffman (1989) argues that similarities between Blackburn and early Maloko wares imply a related origin, presumably in the Chifumbaze of Zambia or the Ivuna of Tanzania, which contains a range of ceramic attributes important in the Blackburn as well as beehive grass huts similar to those made by the Nguni. This is one of the few suggestions of contact between Sotho-Tswana and Nguni speakers on the one hand and farming communities who, if Huffman is correct, were already long established south of the Limpopo. Both ethnographic and archaeological data demonstrate that Sotho-Tswana and Nguni are patrilineal and organize their settlements according to the CCP (Kuper 1980).

From 1,300AD there is increasing evidence for the beginning of agro-pastoralist expansion considerably beyond the area of previous occupation. It is also to this time that the genealogies of several contemporary Bantu speaking groups can be traced (Wilson & Thompson 1969). Associated with this expansion was the regular employment of stone, rather than wood, as building material, an adaptation that has greatly facilitated the discovery and identification of settlements. Maggs (1976) describes 4 basic settlement types all characterized by the use of semi weathered dolomite to produce hard binding *daga* for house floors and a wall building tradition employing larger more regular stones for the inner and outer faces and smaller rubble for the infill. As with the more dispersed homesteads of KwaZulu-Natal and the Eastern Cape, sites tend to be in locally elevated situations, reflecting a deep seated Sotho and Nguni preference for benign higher places rather than supernaturally dangerous riverside localities; another important contrast to both 1st millennium (Maggs 1976) and later Zulu Kingdom settlement patterns (Hall & Maggs 1979).

The lack of evidence for iron production in the interior and eastern part of South Africa emphasize exchange relationships between various groups and associated more centralized polities. By the 19th Century iron production in KwaZulu-Natal was concentrated in particular clans and lineages and associated with a range of social and religious taboos (Maggs 1992). South of Durban comparatively few smelting sites are known (Whitelaw 1991), a trend even more apparent in Transkei (Feely 1987). However, metal remained the most important and archaeologically evident item traded between later farming communities. (Other recorded trade items include glass and ostrich eggshell beads; Indian Ocean seashells; siltstone pipes; *dagga*, and later on tobacco; pigments including ochre, graphite and specularite; hides and salt.)

Rising polity settlements are particularly evident in the north of the country and dated to the 17th Century, including Molokwane, capital of the Bakwena chiefdom (Pistorius 1994) and Kaditshwene, capital of a major section of the Hurutshe, whose population of 20,000 in 1820 almost equals contemporary Cape Town in size (Boeyens 2000). The agglomeration of Tswana settlements in the north of the country was fuelled by both population growth and conflict over access to elephant herds for ivory and long distance trade with the East Coast. During this period ceramic decoration became blander and more standardized than the earlier elaborate decoration that included red ochre and graphite coloring.

The *Mfecane* refers to the wars and population movements of the early 19th Century which culminated in the establishment of the Zulu Kingdom and came to affect much of the interior, even beyond the Zambezi: The late 18th Century was marked by increasing demands for ivory (and slaves) on the part of European traders at Delagoa Bay; as many as 50 tons of ivory were exported annually from 1750-1790. As elephant populations declined, competition increased both for them and for the post 1790 supply of food to European and American whalers calling at Delagoa Bay (Smith 1970). Cattle raiding, conflict over land and changes in climatic and subsistence strategies characterized much of the cultural landscape of the time.

Competition for access to overseas trade encouraged some leaders to replace locally organized circumcision schools and age-sets with more permanently maintained military regiments. These were now used to gain access through warfare to land, cattle and stored food. By 1810 three groups, the Mthethwa, Ndzwandwe and Ngwane dominated northern KwaZulu-Natal (Wright 1995). The Mthethwa paramountcy was undermined by the killing of its leader Dingiswayo in circa 1818, which led to a brief period of Ndzwandwe dominance. In consequence one of Dingiswayo's former tributaries, Shaka, established often forceful alliances with chiefdoms further south. Shaka's Zulu dominated coalition resisted the Ndzwandwe who in return fled to Mozambique. As the Zulu polity expanded it consolidated its control over large areas, incorporating many communities into it. Others sought refuge from political instability by moving south of the Thukela River, precipitating a further *domino effect* as far as the Cape Colony's eastern border (Wright 1995).

4) The Colonial Period

In the 15th Century Admiral Zheng He and his subordinates impressed the power of the Ming Dynasty rulers in a series of voyages as far afield as Java, Sri Lanka, southern Arabia and along the East African coast, collecting exotic animals *en route*. But nothing more came of his expeditions and China never pursued opportunities for trade or colonization (Mote 1991).

Portuguese maritime expansion began around the time of Zheng He's voyages; motivated by a desire to establish a sea route to the riches of the Far East. By 1485 Diogo Cao had reached Cape Cross, 3 years later Bartolomeu Dias rounded the Cape of Good Hope and less than a decade later Vasco da Gama called at several places along South Africa's coast, trading with Khoekhoen (Khoi) at Mossel Bay before reaching Mozambique and crossing the ocean to India. His voyage initiated subsequent Portuguese bases from China to Iraq. In Africa interest was focused on seizing important coastal trading towns such as Sofala and gaining access to the gold of Zimbabwe. Following the 1510 Portuguese-Khoekhoen battle at Table Bay, in which the viceroy of India was killed, Portuguese ships ceased to call along the South African coast (Elphick 1985).

A number of shipwrecks, primarily along the eastern coast attest to Portuguese activity including the Sao Joao, wrecked in 1552 near Port Edward and the Sao Bento, destroyed in 1554 off the Transkei coast. Survivors' accounts provided the 1st detailed information on Africa's inhabitants (Auret & Maggs 1982).

By the late 1500's Portuguese supremacy of the Indian Ocean was threatened. From 1591 numerous Dutch and English ships called at Table Bay and in 1652 the Dutch East India Company (VOC) established a permanent base, with the intent to provide fresh food and water to VOC ships. In an attempt to improve the food supply a few settlers (free burghers) were allowed to establish farms. The establishment of an intensive mixed farming economy failed due to shortages of capital and labor, and free burghers turned to wheat cultivation and livestock farming. While the population grew slowly the area of settlement expanded rapidly with new administrative centers established at Stellenbosch (1676), Swellendam (1743) and Graaf-Reinet (1785). By the 1960's the Colony's frontier was too long to be effectively policed by VOC officials (Elphick 1985).

From the 1700's many settlers expanded inland over the Cape Fold Mountain Belt. The high cost of overland transport constrained the ability to sell their produce while settlement of the interior was increasingly made difficult by resident KhoiSan groups, contributing due to a lack of VOC military support to growing Company opposition in the years before British control of the Cape (1795 / 1806) (Davenport & Saunders 2000).

In 1820 a major British settlement was implanted on the eastern frontier of the Cape Colony, resulting in large numbers of the community moving into the interior, initially to KwaZulu-Natal, and then after Britain annexed Natal (1843), further into the interior to beyond the Vaal River. Disruptions of the *Mfecane* eased their takeover of African lands and the Boers (farmers) established several Republics. A few years later the 2nd South African War saw both the South African and Orange Free State Republics annexed by Britain, a move largely motivated by British desire to control the goldfields of the Witwatersrand. With adjacent regions of the sub-continent also falling, directly or indirectly, under British rule and German colonization of Namibia, European control of the whole of southern Africa was firmly established before the 1st World War (Davenport & Saunders 2000).

➤ Xhosa Iron Age Cultures meets Colonists in the Eastern Cape

From the late 1600's conflict between migrants from the Cape (predominantly Boers) and Xhosa people in the region of the Fish River were strife, ultimately resulting in a series of 9 Frontier Wars (1702-1878) (Milton 1983). Both cultures were heavily based and reliant on agriculture and cattle farming. As more Cape migrants, and later settlers from Britain (1820) and elsewhere arrived, population pressures and competition over land, cattle and good grazing became intense. Cattle raiding became endemic on all sides, with retaliatory raids launched in response. As missionaries arrived with evangelical messages, confrontations with hostile chiefs who saw them as undermining traditional Xhosa ways of life resulted in conflicts which flared into wars.

As pressures between the European settlers and the Xhosa grew, settlers organized themselves into local militia, counteracted by Xhosa warring skills: But both sides were limited by the demands of seasonal farming and the need for labor during harvest. Wars between the Boers and the Xhosa resulted in shifting borders, from the Fish to the Sundays River, but it was only after the British annexed the Cape in 1806 that authorities turned their attention to the Eastern

regions and petitions by the settlers about Xhosa raids. British expeditions, in particular under Colonel John Graham in 1811 and later Harry Smith in 1834, were sent not only to secure the frontier against the Xhosa, but also to impose British authority on the settlers, with the aim to establish a permanent British presence. Military forts were built and permanently manned. Over time the British came to dominate the area both militarily and through occupation with the introduction of British settlers. The imposition of British authority led to confrontations not only with the Xhosa but also with disaffected Boers and other settlers, and other native groups such as the Khoikhoi, the Griqua and the Mpondo. The frontier wars continued over a period of about 150 years; from the 1st arrival of the Cape settlers, and with the intervention of the British military ultimately ending in the subjugation of the Xhosa people. Fighting ended on the Eastern Cape frontier in June 1878 with the annexation of the western areas of the Transkei and administration under the authority of the Cape Colony (Milton 1983).

► The Industrial Revolution

The Industrial Revolution refers roughly to the period between the 18th - 19th Centuries, typified by major changes in agriculture, manufacturing, mining, transport, and technology. Changing industry had a profound effect on socio-economic and socio-cultural conditions across the world: The Industrial Revolution marks a major turning point in human history; almost every aspect of daily life was eventually influenced in some way. Average income and population size began to exhibit unprecedented growth; in the two centuries following 1800 the world's population increased over 6-fold, associated with increasing urbanization and demand of resources. Starting in the latter part of the 18th century, the transition from manual labor towards machine-based manufacturing changed the face of economic activity; including the mechanization of the textile industries, the development of iron-making techniques and the increased use of refined coal. Trade expansion was enabled by the introduction of canals, improved roads and railways. The introduction of steam power fuelled primarily by coal and powered machinery was underpinned by dramatic increases in production capacity. The development of all-metal machine tools in the first two decades of the 19th century facilitated the manufacture of more production machines in other industries (More 2000).

Effects of the Industrial Revolution were widespread across the world, with its enormous impact of change on society, a process that continues today as 'industrialization'.

5) References Cited

1. Aitken, M.J., Stringer, C.B. & Mellars, P.A. (eds). 1993. *The origin of modern humans and the impact of chronometric dating*. Princeton: Princeton University Press
2. Auret, C. & Maggs, T.M.O'C 1982. *The great ship São Bento: remains from a mid-sixteenth century Portuguese wreck on the Pondoland coast*. Annals of the Natal Museum 25:1-39
3. Beaumont, P.B. 1973. *The ancient pigment mines of South Africa*. South African Journal of Science 69: 41-46
4. Binneman, J.N.F. & Beaumont, P.B. 1992. *Use-wear analysis of two Acheulean handaxes from Wonderwerk Cave, Northern Cape*. South African Field Archaeology 1:92-97
5. Boeyens, J.C.A. 2000. *In search of Kadishwene*. South African Archaeological Bulletin 55:3-17
6. Brauer, G. 1982. *Early anatomically modern man in Africa and the replacement of the Mediterranean and European Neanderthals*. In De Lumley, H. (ed) *L'Homme erectus et la place de l'homme de tautavel parmi les hominids fossils*. Nice: Centre National de la Recherche Scientifique
7. Cann, R.L., Rickards, O. & Lum, J.K. 1994. *Mitochondrial DNA and human evolution: our one lucky mother*. Nature 325: 31-36
8. Campbell, A.C. 1991. *The riddle of the stone walls*. Botswana Notes and Records 23:243-249
9. Clarke, R.J. 1999. *A discovery of complete arm and hand of the 3.3 million year old Australopithecus skeleton from Sterkfontein*. South African Journal of Science 95:447-480
10. Dart, R.A. 1925. *Australopithecus africanus: the man-ape of South Africa*. Nature 115:195-199
11. Davenport, T.R.H. & Saunders, C. 2000. *South Africa: A modern history*. London: Macmillan
12. Davies, O. 1971. *Excavations at Blackburn*. South African Archaeological Bulletin 26: 165-178
13. Deacon, H.J. 1970. *The Acheulean occupation at Amanzi Springs, Uitenhage District, Cape Province*. Annals of the Cape Provincial Museums 8:89-189
14. Deacon, J. 1984. *Later Stone Age people and their descendants in southern Africa*. In Klein, R.G. (ed). *Southern Africa prehistory and paleoenvironments*. Rotterdam: A.A. Balkema
15. Deacon, H.J. & Deacon, J. 1999. *Human Beginnings in South Africa. Uncovering the Secrets of the Stone Age*. Cape Town: David Phillip Publishers
16. Deacon, J. & Dowson, A.D. (eds.) 2001. *Voices from the past. /Xam Bushmen and the Bleek and Lloyd Collection*. Johannesburg: Witwatersrand University Press
17. Eloff, J.F. & Meyer, A. 1981. *The Greefswald sites*. In Voigt, E.A. (ed) *Guide to archaeological sites in the northern and eastern Transvaal*. Pretoria: South African Association of Archaeologists
18. Elphick, R. 1985. *Khoikhoi and the founding of white South Africa*. Johannesburg: Ravan Press
19. Evers, T.M. 1980. *Klingbeil Early Iron Age sites, Lydenburg, Eastern Transvaal, South Africa*. South African Archaeological Bulletin 35:46-57
20. Feeley, M. 1987. *The early farmers of Transkei, southern Africa, before AD 1870*. Oxford: British Archaeology Reports
21. Foley, R.A. & Lahr, M.M. 1997. *Mode 3 technologies and the evolution of modern humans*. Cambridge Archaeological Journal 7:3-36
22. Goodwin A.J.H. & van Riet Lowe, C. 1929. *The Stone Age cultures of South Africa*. Annals of the South African Museum 27:1-289
23. Hall, M. & Maggs, T.M.O'C. 1979. *Nqabeni: a later Iron Age site in Zululand*. South African Archaeological Society Goodwin Series 3:159-176
24. Hensilwood, C. & Sealy, J.C. 1997. *Bone artefacts from the Middle Stone Age at Blombos Cave, southern Cape, South Africa*. Current Anthropology 38:390-395
25. Huffman, T.N. 1980. *Ceramics, Classification and Iron Age Entities*. African Studies 39:123-174
26. Huffman, T.N. 1989. *Ceramics, Settlements and Late Iron Age Migrations*. African Archaeological Review 7: 155-182
27. Huffman, T.N. 1986. *Iron Age Settlement Patterns and the Origin of Class Distinction in Southern Africa*. Advances in World Archaeology 5:291-338
28. Huffman, T.N. 1994. *Toteng Pottery and the Origins of Bambata*. Southern African Field Archaeology 3:3-9
29. Huffman, T.N. 1998. *The Antiquity of Lobola*. South African Archaeological Bulletin 53:57-62
30. Keyser, A., Menter, C.G., Moggi-Cheggi, J., Pickering, T.R. & Berger, L.R. 2000. *Drimolen: A New Hominid Bearing Site in Gauteng, South Africa*. South African Journal of Science 96:193-197
31. Klapwijk, M. 1974. *A Preliminary Report on Pottery from the North-Eastern Transvaal, South Africa*. South African Archaeological Bulletin 29:19-23
32. Klein, R.G. 1999. *The Human Career: Human Biological and Cultural Origins*. Chicago: University of Chicago Press
33. Kuman, K., Field, A.S. & Thackeray, J.F. 1997. *Discovery of New Artefacts at Kromdraai*. South African Journal of Science 93: 187-193
34. Kuper, A. 1980. *Symbolic Dimensions of the Southern Bantu Homestead*. Africa 1:8-23
35. Leakey, M.G., Feibel, C.S., McDougall, I. & Walker, A.C. 1995. *New Four-Million-Year-Old Hominid Species from Kanapi and Allia Bay, Kenya*. Nature 376:565-57

36. Lewis-Williams, D. & Dowson, T. 1999. *Images of Power. Understanding San Rock Art*. Halfway House: Southern Book Publishers
37. Maggs, T.M.O'C. 1976. *Iron Age communities of the Southern Highveld*. Pietermaritzburg: Natal Museum
38. Maggs, T.M.O'C. 1992. 'My Father's Hammer Never Ceased its' Song Day and Night': The Zulu Ferrous Metalworking Industry. *Natal Museum Journal of Humanities* 4:65-87
39. Maggs, T.M.O'C. 1994. *The Early Iron Age in the Extreme South: Some Patterns and Problems*. *Azania* 29/30:171-178
40. Mellars, P.A. & Stringer, C.B. (eds). 1989. *The Human Revolution: Behavioural and Biological Perspectives on the Origins of Modern Humans*. Edinburgh: Edinburgh University Press
41. Miller, D.E. 1996. *The Tsodilo Jewellery: Metal Work from Northern Botswana*. Cape Town: University of Cape Town Press
42. Milton, J. 1983. *The Edges of War. A History of Frontier Wars (1702-1878)*. Kenwyn: Juta & Co.
43. Mitchell, P. 2002. *The Archaeology of Southern Africa*. Cambridge: Cambridge University Press
44. Meyer, A. 1988. *N Kultuurhistories Interpretasie van die Ystertydperk in die Nasionale Krugerwildtuin*. Phd thesis, University of Pretoria
45. Meyer, A. 1998. *The Archaeological Sites of Greefswald*. Pretoria: University of Pretoria Press
46. More, C. 2000. *Understanding the Industrial Revolution*. London: Routledge
47. Mote, F.W. 1991. *China in the Age of Columbus*. In Levenson, J.A. (ed) *Circa 1492: Art in the Age of Exploration*. New Haven: Yale University Press
48. Nitecki, M.H. & Nitecki, D.V. (eds). 1994. *Origins of Anatomically Modern Humans*. New York: Plenum
49. Noble, W & Davidson, I. 1996. *Human Evolution, Language and Mind: A Psychological and Archaeological Enquiry*. Cambridge: Cambridge University Press
50. Nogwaza, T. 1994. *Early Iron Age Pottery from Canasta Place, East London District*. *South African Field Archaeology* 3:103-106
51. Pakenham, T. 1993. *The Illustrated Boer War*. Parklands: Jonathan Ball Publishers.
52. Pistorius, J.C.C. 1992. *Molokwane an Iron Age Bakwena Village. Early Tswana Settlement in the Western Transvaal*. Johannesburg: Perskor Press.
53. Prins, F.E. & Grainger, J.E. 1993. *Early Farming Communities in Northern Transkei: The Evidence from Ntsitsana and Adjacent Areas*. *Natal Museum Journal of Humanities* 5:153-174
54. Phillipson, D.W. 1977. *The Later Prehistory of Eastern and Southern Africa*. London: Heineman
55. Prinsloo, H. P. 1974. *Early Iron Age Site at Klein Afrika near Wyliespoort, Soutpansberg Mountains, South Africa*. *South African Journal of Science* 70:271-273
56. Prinsloo, H.P. 1989. *Vroe Ystertydperk Terreine in die Soutpansberg*. M.A. Thesis, University of Pretoria
57. Rightmire, G.P. 1976. *Relationships of Middle and Upper Pleistocene Hominids from Sub-Saharan Africa*. *Nature* 260:238-240
58. Robey, T.S. 1980. *Mpanbanyoni, A Late Iron Age Site on the Natal South Coast*. *Annals of the Natal Museum* 24:147-164
59. Sibley, C.G. & Ahlquist, J.E. 1984. *The Phylogeny of the Hominid Primates as Indicated by DNA-DNA Hybridization*. *Journal of Molecular Evolution* 20:2-15
60. Smith, A.K. 1970. *The struggle for the Control of Southern Mozambique 1720-1835*. Ossa 63-96
61. Stringer, C.B. 1985. *Middle Pleistocene Hominid Variability and the Origin of Late Pleistocene Humans*. In Delson, E. (ed) *Ancestors: The Hard Evidence*. New York: Alan Liss
62. Tobias, P.V. 2000. *The Fossil Hominids*. In Partridge, T.C. & Maud, R.R. *The Cenozoic of Southern Africa*. Oxford: Oxford University Press
63. Volman T.P. 1984. *Early Prehistory of Southern Africa*. In Klein, R.G. *Southern Africa Prehistory and Palaeoenvironments*. Rotterdam: A.A. Balkema
64. Vrba, E.S. 1992. *Mammals as a Key to Evolutionary Theory*. *Journal of Mammalogy* 73:1-28
65. White, T.D., Suwa, G. & Asfaw, B. 1994. *Australopithecus Ramidus: A New Species of Early Hominid from Aramis, Ethiopia*. *Nature* 371:306-312
66. Whitelaw, G. 1991. *Precolonial Iron Production around Durban and in Southern KwaZulu-Natal*. *Natal Museum Journal of Humanities* 3:29-39
67. Whitelaw, G. & Moon, M. 1996. *The Distribution and Ceramics of Pioneer Agriculturists in KwaZulu-Natal*. *Natal Museum Journal of Humanities* 8:53-79
68. Wilson, M. & Thompson, L. (eds). 1969. *Oxford History of South Africa*. Oxford: Oxford University Press
69. Wright, J.B. 1995. *Political Transformations in the Thukela-Mzimkhulu Region in the Late Eighteenth and Early Nineteenth Centuries*. In Hamilton, C. *The Mfecane Aftermath: Reconstructive Debates in Southern African History*. Johannesburg: Witwatersrand University Press

Phase 2b Archaeological Monitoring –
**Samy's Wholesalers Extension Development, Erf 44500, c/o Quinn & Lawrence Streets,
Kimberley, Sol Plaatjie Municipality, Northern Cape, South Africa**
[SAHRIS Case ID #6899; SAHRA BGG Unit Permit ID #2016]



- 31 August 2015 -

Attention:

Itumeleng Masiteng (South African Heritage Resources Agency – SAHRA BGG Unit)
E-mail: imasiteng@sahra.org.za; Tel: 012 941 4967; Postal Address: 470 Paul Kruger Street, Pretoria, 0001

Tom Pillay (P&V Pillay Family Trust)
E-mail: sales@samys.co.za; Tel: 082 460 0662; Postal Address: P.O. Box 3109, Kimberley, 8300

RE: Phase 2b Archaeological Monitoring – Samy's Wholesalers Extension Development, Erf 44500, c/o Quinn & Lawrence Streets, Kimberley, Sol Plaatjie Municipality, Northern Cape, South Africa [SAHRIS Case ID #6899; SAHRA BGG Unit Permit ID #2016]

Below listed archaeological Cultural Resources Management (CRM) reports refer to the heritage compliance process pertaining to SAHRIS Case ID #6899, the case of the Samy's Wholesalers Extension development, situated at general development co-ordinate S28°43'53.0"; E24°45'57.8", Erf 44500, c/o Quinn & Lawrence Streets, Sol Plaatjie Municipality, Northern Cape, with specific reference to the final Phase 2 mitigation report (Pelser & Van Ryneveld 2015):

- Barnardt, B. (Terra Scan). 2015b. *Ground Penetrating Radar Survey of Erf 44500, Corner of Quinn and Lawrence Streets Kimberley, Undertaken on behalf of P&V Pillay Family Trust, 23-24 January 2015.*
- Gaigher, S. (G&A Heritage). 2014. *Heritage Impact Assessment Report for the Proposed Expansion of the Samy's Wholesalers Warehouse, Kimberley – Northern Cape Province.*
- Pelsner, A.J. (APAC). 2015. *Interim Report – Samy's Wholesalers Extension (Samy's Wholesalers Extension Test Excavation). Test Excavation within the Western Portion of Erf 44500 (SAHRA BGG Unit Permit ID#2016 Case ID#6899).*
- Pelsner, A.J. & Van Ryneveld, K. (APAC). 2015. *Final Report on the Samy's Wholesalers Extension Test Excavations within the Western Portion of Erf 44500.*
- Van Ryneveld, K. (ArchaeoMaps). 2015. *Archaeological and Cultural Heritage Impact Assessment – Samy's Wholesalers Extension, Erf 44500, Kimberley, Sol Plaatje Municipality, Northern Cape.*

In accordance with recommendations of the Pelsner (2015) and Pelsner & Van Ryneveld (2015) reports the SAHRA BGG Unit Final Comment, issued 3 June 2015 stated, amongst others, that it can reasonably be concluded that development will not impact on the inferred 1870's 'Black' migrant worker cemetery and that development may proceed without further delay. The SAHRA BGG Unit Final Comment reiterates conditions of the SAHRA BGG Unit Interim Comment (12 May 2015), issued on the Pelsner (2015) report stating that: 'According (to) point 4 of the Final Decision it is recommended that monitoring of the area should be upheld in case human remains are uncovered during development. If such a discovery is made, the Burial Grounds and Graves Unit should be notified...'

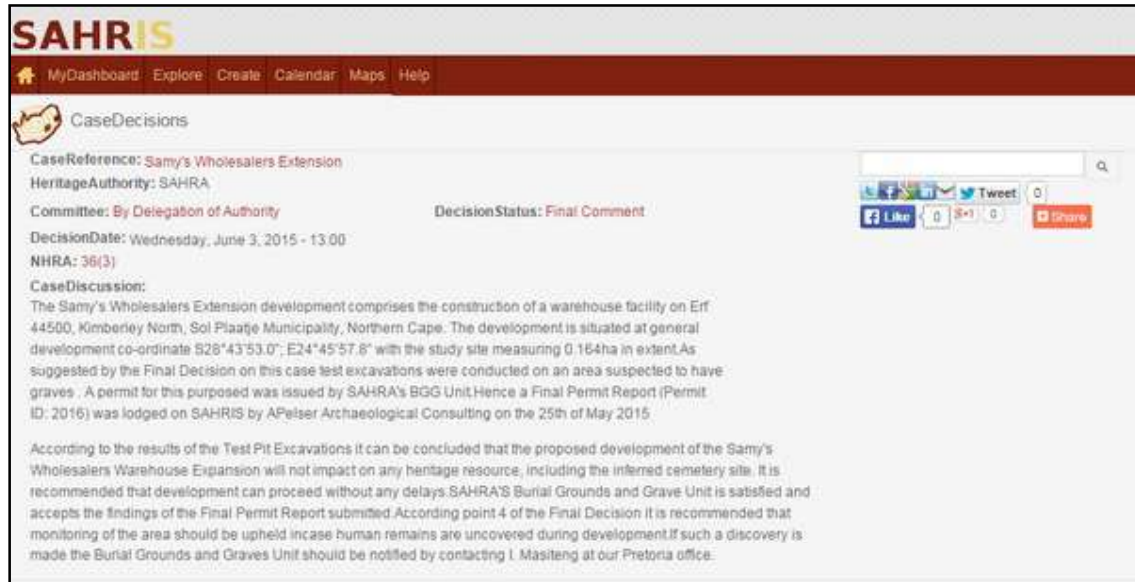


Figure 1: SAHRIS Case ID #6899, BGG Unit Final Comment, 3 June 2015

This report is submitted in accordance with the referenced SAHRA BGG Unit Final Comment stipulation. The report serves to verify that no human remains were encountered during the course of foundation excavations for purposes of development.

- Phase 2b Archaeological Monitoring was done over a 2 day period (27 & 28 August 2015). Archaeological monitoring focused on mechanical excavation monitoring for purposes of foundation excavation trenching. Mechanical trenching was complimented by manual cleaning of excavations. Foundation excavation delineation followed alignments photographically reported on by Pelser (2015) and Pelser & Van Ryneveld (2015). Post-submission of the Pelser & Van Ryneveld (2015) report the study site was levelled, on average raised between 20-90cm to reach varying necessary levels for construction purposes. Foundation delineation was re-marked on development outlines originally monitored during the Phase 2 test excavations and mechanically excavated to depths as originally reported on (Pelser 2015), reaching levels of between 20-50cm below the original surface and between ~50cm-1m below the altered surface. No human remains were encountered during the course of final foundation trenching, including mechanical and manual excavation.

This report closes archaeological compliance reporting on behalf of the developer for purposes of the Samy's Wholesalers Extension development, Erf 44500, Kimberley, Sol Plaatje Municipality, Northern Cape.

Yours sincerely,

Karen van Ryneveld (ArchaeoMaps)

E-mail: kvanryneveld@gmail.com; Tel: 084 871 1064; Postal Address: Postnet Suite 239, Private Bag X3, Beacon Bay, 5205

[Submitted on behalf of Tom Pillay, P&V Pillay Family Trust.]



Plate 1: Final site measurements prior to mechanical trench excavations



Plate 3: Mechanical trenching – northern structure foundations [2]



Plate 2: Mechanical trenching – northern structure foundations [1]



Plate 4: Mechanical trenching – western structure foundations



Plate 5: Mechanical trenching – southern structure foundations [1]



Plate 7: Foundation demarcation and trench excavation, southern structure foundations



Plate 6: Mechanical trenching – southern structure foundations [2]



Plate 8: Trench excavations along the south-eastern boundary of the site



Plate 9: Manual cleaning of mechanically excavated foundation trenches



Plate 11: Excavation trenching, south-eastern corner of structure foundations, with developer Tom Pillay, P&V Pillay Family Trust



Plate 10: Mechanical trenching – eastern structure foundations



Plate 12: General site view after foundation trenching, with the Samy's wholesalers depot in the background

© Intellectual property of information contained in this report is vested with the author, Karen van Ryneveld, ArchaeoMaps. Information may only be used for the purpose intended by the project proponent, P&V Pillay Family Trust, including compliance to heritage requirements for purposes of development of the Samy's Wholesalers Extension development, Erf 44500, c/o Quinn & Lawrence Streets, Kimberley, Sol Plaatjie Municipality, Northern Cape, SA, or by prior authorization by the project proponent to a third party for purposes as agreed upon.

Specialist Declaration of Interest

I, Karen van Ryneveld (Company – ArchaeoMaps; Qualification – MSc Archaeology), declare that:

- I am suitably qualified and accredited to act as independent specialist in this application;
- I do not have any financial or personal interest in the application, its' proponent or any subsidiaries, aside from fair remuneration for specialist services rendered; and
- That work conducted has been done in an objective manner – and that any circumstances that may have compromised objectivity have been reported on transparently.



Signature –

- 31 August 2015 -

P.O.BOX73703

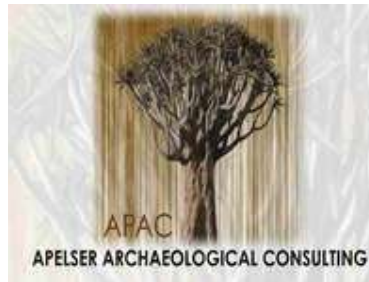
LYNNWOOD RIDGE

0040

Tel: 083 459 3091

Fax: 086 695 7247

Email: pelseranton@gmail.com



Comprehensive and Professional Solutions for all Heritage Related Matters
CK 2006/014630/23 VAT NO.: 4360226270

2015-05-06

To Whom It May Concern

SAHRA – Burial Grounds & Graves Unit

RE: INTERIM REPORT – Samy' Wholesalers Extension (Samy's Wholesalers Extension Test Excavation). Test excavations within the western portion of Erf 44500.

This interim report pertains to the above mentioned work permitted under SAHRA BGG Unit Permit ID#2016 Case ID#6899.

The conditions of the issued permit to Mr. A.Pelser (as Principal Investigator) were as follows:

“Conditions: Test excavations within the western portion of the Erf 44500 as this area is mostly likely to retain in situ graves. If graves are uncovered the exhumation and relocation of such graves will be carried under this permit. If such a discovery is made the exhumation should continue because the extension of Samy's Wholesalers will impact upon such graves.”

The fieldwork on the site was undertaken between the 4th and 6th of May 2015, with the aim of testing the western portion of the Erf, where human remains were discovered in late 2011 and excavated in 2012 by Dr. David Morris of the McGregor Museum in Kimberley, as part of the Neotel (fibre-optic line) Phase 2 Mitigation project. The discovery of these remains (and earlier during 2004 in the parking lot development of Samy's Wholesalers) prompted the requirement that all future development and infrastructure tasks in the area north of the old Pioneer Cemetery in the vicinity of Quinn and Lawrence Streets and possibly over a larger area should be monitored and no development should be entertained without prior assessment.

Subsequently, with the expansion of Samy's Wholesalers warehouse being proposed, it was required (as per the above permit) that prior to the development being allowed to continue, that Test Excavations be carried out on the western portion of the Erf 44500 to see if more in situ burials exist here and to recover (if any were to found) all remains for reburial purposes. The test excavations consisted of the following:

1. A 1m (wide) x approx.20m (long) trench on the western portion of the erf running in a N/S direction (bordering Lawrence Street and next to the Neotel Line). GPS: S28°43'52.4" E24°45'56.2".

AJ Pelser BA (UNISA), BA (Hons) (Archaeology) [WITS], MA (Archaeology) [WITS]

Beatrix Bed & Breakfast Trading as A Pelser Archaeological Consulting

3. Six Test Pits (TP1 – TP6), scattered across the central and eastern portion of the site, where limited known structural remains, primarily dating to the 1940's but not necessarily excluding earlier activity, were found during GPR scanning of the development area, with the aims of determining whether or not there were any evidence of a burial site/cemetery existing here prior to later developments.
GPS: S28°43'52.2" E24°45'57.3" (TP1); S28°43'53.0" E24°45'57.4" (TP2); S28°43'52.9" E24°45'57.9" (TP3); S28°43'53.3" E24°45'58.3" (TP4); S28°43'53.6" E24°45'59.0" (TP5) & S28°43'53.9" E24°45'59.3".

Results of Test Excavations

The monitoring of the foundation trenches (between 0.50m and 0.80m deep) revealed to some extent what was recorded on the GPR scans of the area previously, and that is that there are various structural remains and other disturbances in the area dating to the 1940's, with material cultural remains dating roughly to the 1870's-early 1900's. No evidence of burials pits were identified in any of these foundation trenches.



Figure 2: The development area taken from Lawrence street towards the east showing the foundations test trenches being dug.



Figure 3: A closer view of the foundation trenches taken down Quinn street towards Lawrence street.



Figure 4: Some late 19th to mid 20th century bottle glass from the foundations.



Figure 5: Teaspoons from Phillip Ashbury & Sons in Sheffield (UK) dating to the late 19th century. Small spoon uncovered during May 2015 test excavation, larger spoon uncovered January 2015 (Van Ryneveld 2015).



Figure 6: Building rubble from the 1940's.

Test Trench 1 – Western section of Site (next to Neotel Line in Lawrence street)

Although the trench ran next to Neotel's line, a section of the trench cut into the line exposing the Neotel line insertion. No evidence of any burial pits or unnatural disturbances was identified in the trench, with sterile gravel/shale found at a depth of between 0.80m and 1.20m (from the Present Surface Level or PSL) where the trenching was stopped. Some cultural material including glass, metal objects and building rubble was however recovered from depths of between 0.60m and 0.80m below PSL.

Test Trenches 2 – 4 – Western section of site running in an E/W direction

These trenches also revealed no clear evidence of any burials in this part of the development site, with no disturbances in the form of burial pits identified. Sterile gravel/shale was found at a depth of around 1.20m and more below PSL, with building rubble (1940's?), and other material such as glass and porcelain from the late 19th to early 20th centuries recovered as well. The amount of material is however very small. Each test trench was around 1.00m to 1.50m in size, excavated by TLB.

In Test Trench 3 some faunal and a possible human ulna fragment were recovered. Last mentioned long bone was broken in two (not during the 2015 excavations) and was clean, with no soil/dirt adhering to it. No other remains were recovered and it seems as if this bone could have been left behind during earlier work on the Neotel line mitigation. The bone was found in the western portion of TT3 on the edge of TT1 trench (Neotel line). This is however speculation and cannot be determined without a doubt.

Remnants of a fairly extensive rocky ridge were found in the eastern section of TT3, extending some distance towards the east and west thereof and extending across the majority of the western perimeter of the study site. Any excavation of burial pits in this part would have been very difficult, and if burials (even if shallow) were to have been dug here it would have been more towards the western portion of the now buried outcrops, as evidenced by the 2011 discoveries and removal of human remains on the Neotel Line running parallel to Lawrence street.



**Figure 7: Test Trench 1 prior to excavation.
The man-holes show the approximate Neotel Line connection.**



**Figure 8: TT1 being excavated.
A section of the Neotel Line connection was exposed.**



Figure 9: TT1 – Sterile gravel/shale found at around 1.20m below PSL.



Figure 10: Cultural material from TT1.



Figure 11: Bone and wood from TT2/3.
The one bone at the top could be human, but this is inconclusive.



Figure 12: Part of the remnants of a rocky ridge/seam in TT3.



Figure 13: TT2.



Figure 14: TT4.

Test Pits 1 – 6

All six test pits were around 1.5m (length and width) in size. The depth at which sterile gravel/shale was found in all of these pits range between 1.20m and 1.60m below PSL, except for TP6 where a concrete floor/slab was found at a depth of around 0.30m below PSL, interpreted as a type of station platform considering its location in relation to the railway siding and CSG surveyed demarcation (See map 10, Van Ryneveld 2015).

No indication of any burial pits was found in any of the Test Pits. What was however recovered, fairly consistently throughout all of these pits (TP1, TP2, TP3) were sections of structures and building rubble, as well as ash and refuse pits between approximately 0.50m and 1.20 – 1.50m depth. If any earlier burial pits or a large cemetery existed here prior to this then it would have been expected to be below the 1940's structural remains: No evidence however exists. The cultural material from these test pits ranges in age between the late 19th and early/mid 20th centuries.



Figure 15: Test Pit 1 – Part of concrete structure visible in eastern section of pit.



**Figure 16: Cultural material from TP2.
The bone is from a juvenile goat/sheep.**



Figure 17: TP2 - Building rubble visible on eastern side of pit.



Figure 18: TP3.



Figure 19: Cultural material from TP3.



Figure 20: Building rubble in TP4's north-western corner.



Figure 21: Ash and refuse layer in TP4's south-western section.



Figure 22: Cultural material from TP4.
The ages range between the late 19th and early/mid 20th centuries.



Figure 23: TP5.



Figure 24: Cultural material from TP5.



Figure 25: TP6.



Figure 26: TP6 – Note the concrete floor/slab that runs through the whole trench.



Figure 27: Cultural material from TP6.



Figure 28: Aerial view of site showing location/distribution of Test Trenches and Pits.

Conclusions and recommendations

In conclusion it is possible to say that the work on Erf 44500 in Kimberley, for the Samy's Wholesalers Warehouse Expansion development, was conducted successfully and within the requirements of the SAHRA BGG Unit permit issued for the Test Excavations within the western portion of Erf 44500 ***“as this area is mostly likely to retain in situ graves”***. A number of Test Trenches (TT1 – TT4) was excavated in the western-most portion of the site, next to the Neotel Line and adjacent to it where human

remains were uncovered in 2011/12. No indication of burial pits in this area and further to the eastern section of this site was identified, with a single unidentified bone, possibly human, recovered from a section of TT3 most likely to be related to the earlier 2012 exhumations and not part of an in situ previously unrecorded burial.

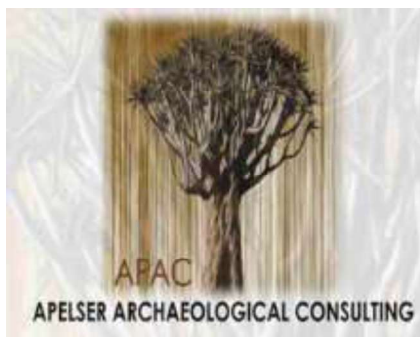
The six Test Pits (TP1-6) dug across the central and eastern portion of the study site similarly revealed no indication of any burial pits or the existence of a cemetery. Structural remains, some picked up on the GPR scan and some indicated on early maps, dating to the 1940's, and cultural material from both this time period and the earlier late 19th to mid 20th centuries were found in the test pits. If these structures, residential or otherwise were in fact constructed on top of an earlier cemetery, then clear evidence of burial pits would have been uncovered in test pit section stratigraphies: No such evidence could be found.

Test pit data indicate that it is unlikely that the proposed Samy's Wholesalers Warehouse Expansion development will impact on a cemetery or any unknown burials. Results of the Test Pit Excavations contribute to interpretation of the possible location of the 1870's Black migrant worker cemetery, but limited to evidence that Erf 44500 is not the said locality.

Based on the results of the Test Pit Excavations it can be concluded that the proposed development of the Samy's Wholesalers Warehouse Expansion will not impact on any heritage resource, including the inferred cemetery site, or any significant cultural member: It is recommended that development proceed without further delay and without the developer having to comply with additional archaeological and cultural heritage compliance requirements.

Anton Pelser
Principal Investigator





Comprehensive and Professional Solutions for all Heritage Related Matters
CK 2006/014630/23 **VAT NO.: 4360226270**

**FINAL REPORT ON THE SAMY'S WHOLESALERS EXTENSION TEST
EXCAVATIONS WITHIN THE WESTERN PORTION OF ERF 44500**

For:

*Samy's Wholesalers
P.O.Box 3109
Kimberley
8300*

REPORT: APAC015/25

*A.J. Pelser & K.van Ryneveld
Professional Members of ASAPA*

Report: *May 2015*

**P.O.BOX 73703
LYNNWOOD RIDGE
0040
Tel: 083 459 3091
Fax: 086 695 7247
Email: pelseranton@gmail.com**

Member: AJ Pelser BA (UNISA), BA (Hons) (Archaeology), MA (Archaeology) [WITS]

©Copyright

APELSE ARCHAEOLOGICAL CONSULTING

The information contained in this report is the sole intellectual property of APelser Archaeological Consulting. It may only be used for the purposes it was commissioned for by the client.

**I HEREBY DECLARE THAT I AM AN INDEPENDENT
SPECIALIST APPOINTED BY THE CLIENT ON A CONSULTANCY
BASIS**

A handwritten signature in black ink, appearing to read "J. Heber". The signature is stylized with a large, looped initial "J" and a trailing dot.

SUMMARY

This Final Report pertains to work permitted under SAHRA BGG Unit Permit ID#2016 Case ID#6899.

The fieldwork on the site was undertaken between the 4th and 6th of May 2015, with the aim of testing the western portion of the Erf. Human remains weren't discovered on Erf 44500, it was discovered on the adjacent erven, the 'pavement', which is Municipal property, where human remains were discovered in late 2011 and excavated in 2012 by Dr. David Morris of the McGregor Museum in Kimberley, as part of the Neotel (fibre-optic line) Phase 2 Mitigation project. The discovery of these remains (and earlier during 2004 in the parking lot development of Samy's Wholesalers) prompted the requirement that all future development and infrastructure tasks in the area north of the old Pioneer Cemetery in the vicinity of Quinn and Lawrence Streets and possibly over a larger area should be monitored and no development should be entertained without prior assessment.

Subsequently, with the expansion of Samy's Wholesalers warehouse being proposed, it was required (as per the above permit) that prior to the development being allowed to continue, that Test Excavations be carried out on the western portion of the Erf 44500 to see if more in situ burials exist here and to recover (if any were to found) all remains for reburial purposes.

Test pit data indicate that it is unlikely that the proposed Samy's Wholesalers Warehouse Expansion development will impact on a cemetery or any unknown burials. Based on the results of the Test Pit Excavations it can be concluded that the proposed development of the Samy's Wholesalers Warehouse Expansion will not impact on any heritage resource, including the inferred cemetery site, or any significant cultural member: It is recommended that development proceed without further delay and without the developer having to comply with additional archaeological and cultural heritage compliance requirements.

CONTENTS

SUMMARY	3
CONTENTS.....	4
INTRODUCTION	5
TERMS OF REFERENCE	5
METHODOLOGY	6
HISTORICAL BACKGROUND	6
ARCHAEOLOGICAL INVESTIGATIONS.....	16
1. <i>MAPPING</i>	17
2. <i>EXCAVATIONS</i>	21
CONCLUSIONS AND RECOMMENDATIONS	37
REFERENCES	37
ACKNOWLEDGEMENTS.....	38

FINAL REPORT ON THE SAMY'S WHOLESALERS EXTENSION TEST EXCAVATIONS WITHIN THE WESTERN PORTION OF ERF 44500

INTRODUCTION

The fieldwork on the site was undertaken between the 4th and 6th of May 2015, with the aim of testing the western portion of the Erf. Human remains weren't discovered on Erf 44500, it was discovered on the adjacent erven, the 'pavement', which is Municipal property, where human remains were discovered in late 2011 and excavated in 2012 by Dr. David Morris of the McGregor Museum in Kimberley, as part of the Neotel (fibre-optic line) Phase 2 Mitigation project. The discovery of these remains (and earlier during 2004 in the parking lot development of Samy's Wholesalers) prompted the requirement that all future development and infrastructure tasks in the area north of the old Pioneer Cemetery in the vicinity of Quinn and Lawrence Streets and possibly over a larger area should be monitored and no development should be entertained without prior assessment.

Subsequently, with the expansion of Samy's Wholesalers warehouse being proposed, it was required that prior to the development being allowed to continue, that Test Excavations be carried out on the western portion of the Erf 44500 to see if more in situ burials exist here and to recover (if any were to found) all remains for reburial purposes.

A permit was issued by SAHRA's BGG Unit (Permit ID#2016 Case ID#6899) to undertake the required work, with the conditions of the issued permit to Mr. A.Pelser (as Principal Investigator) as follows:

“Conditions: Test excavations within the western portion of the Erf 44500 as this area is mostly likely to retain in situ graves. If graves are uncovered the exhumation and relocation of such graves will be carried under this permit. If such a discovery is made the exhumation should continue because the extension of Samy's Wholesalers will impact upon such graves.”

This report will discuss the results of the various test excavations and will provide recommendations on the way forward at the end.

TERMS OF REFERENCE

The Terms of Reference for the Project were as follows:

1. To conduct test excavations in the western portion of Erf 44500 to see if there are any burials located here related to an earlier so-called Black/African “Pioneer” Cemetery (formal or informal) that will be impacted on by the proposed development
2. To facilitate the reburial of any human remains that would potentially be uncovered during the Test Excavations
3. To determine if there are any other significant heritage remains in the study area that could be impacted on by the proposed development

4. And finally to provide suitable mitigation measures in future should this be required
- ## **METHODOLOGY**

The methodology employed comprises the following:

Background Research – This included background research on the area and history regarding the site and its connection with the possible Black/African cemetery in the area, as well as any other heritage resources

Photographic - Photographs of the site and area was taken, while all identifiable features, excavations and individual objects were also photographed for recording purposes.

Mapping & GPR Scanning

All identifiable features, objects, test excavations/pits and the site's extent were recorded via handheld GPS, while GPR scanning of the study area was also undertaken prior to the physical excavations starting. This was done in order to determine if there are any possible disturbances (graves and others) in the area under discussion.

Test Excavations

A number of test trenches and pits (10 in total) were dug, using a TLB and shovel/trowels, across the area. All features and material identified and removed were photographically documented and described on site

Analysis & Documentation/Curation of cultural material

All the cultural material recovered were documented photographically and analyzed accordingly. The cultural material was also cleaned, packed and placed in labeled bags and boxes for eventual proper curation in a suitable and recognized institution such as the McGregor Museum in Kimberley

HISTORICAL BACKGROUND

The historical background information provided here is taken from the February 2015 Archaeological & Cultural Heritage Impact Assessment by Karen Van Ryneveld of ArchaeoMaps for the proposed development (February 2010: p.23-39).

Colonial Period archaeological CRM records for Kimberley reflect a faceted history, including historical buildings and structure remains, a number of middens, early mining village remains and associated industrial infrastructural remnants. Remains are often associated with records of cemeteries and grave sites of cross cultural tradition and including amongst them a Colonial Period grave site reported on by Becker (2013), the Du Toitspan cemetery; Phase 2 mitigation (excavation) records of previously unknown graves at the Gladstone cemetery (Morris et. al. 2004); recently mitigated graves from the Greenpoint suburb of Kimberley (SAHRIS Case ID 5153) and with more direct reference to the Samy's Wholesalers Extension study site, 4 graves mitigated from 87

Transvaal Road (Morris 2004) and 9 from Lawrence Street during a 2012 Neotel development.

In 1866 the 15 year old Erasmus Jacobs discovered a 'bright pebble' (diamond) on his fathers' farm, De Kalk, near Kimberley. Passed on to their neighbor Schalk van Niekerk, the diamond was traded through Dr. Guyborn Atherstone and became known as the 21.25 carat 'Eureka'. Merely 3 years later (1869) Schalk van Niekerk sold another diamond, obtained from a Griqua, for £11,200 – a diamond that was to become internationally known as the 'Star of Africa'. The same year witnessed the discovery of an 83.5 carat diamond on the farm Vooruitzicht, then owned by the brothers Diederick Arnoldus and Johannes Nicolaas de Beer. Between 1869 and 1871 surface outcrops of four diamondiferous pipes were located, all in fair proximity to the Vaal River, on land then held under Orange Free State titles by Dutch speaking farmers. The 'Diamond Rush' that followed was to forever change the cultural landscape of the area.

During the latter part of the 1860's / early 1870's only Cape Town, Port Elizabeth and Kimberley had populations of over 10,000. An 1878 census recorded Kimberley's population as 14,169 including Europeans (6,574) and non-Europeans (7,595) (Diamond News 1879). During the 1880's Kimberley's population had grown to over 50,000. Dispute over ownership of the diamond fields immediately followed the discovery of diamonds; involving the Transvaal and Orange Free State Boer Republics, Griqua, Korana and Thlaping communities and the Cape Colonial Government. Through the Keate Arbitration of 1871 the diamond fields were awarded to the Griqua, directly to the Chief of the Griqua, Nicolaas Waterboer; thereby effectively proclaimed British territory under the name Griqualand-West. In 1879 Griqualand-West was annexed to the Cape Colony.

The population of Kimberley at the time was mixed, comprising Cape Colonists, mainly English and Dutch speaking, of varying racial groups and socio-economic backgrounds, as well as many African wage laborers. The complexity of only indigenous Africans in Kimberley was at the time further described by Rev. Tyamzashe (Christian Express newspaper, 1874, after Gaigher 2014): *'From the missionary point of view, it is not easy to deal with such a mixture of tribes as we have on the diamond fields. There are San, Khoikhoi, Griquas, Bathlaping, Damaras, Barolong, Barutse..., Bapedi, Baganana, Basutu, Maswaza, Matanga, Matabele, Mabaca, Mampondo, Mamfengu, Batembu, Maxhosa etc. Many of these (people) can hardly understand each other, and in many cases they have to converse through the medium of either Dutch, Sesotho or Xhosa. Those coming from far up in the interior such as the Bapedi come with the sole purpose of securing guns. Some of them therefore resolve to stay no longer here than is necessary to get some £6-£7 for the gun. Hence you will see hundreds of them leaving the fields, and as many arriving from the north almost every day.'*

During the late 1860's to early 1870's claims were primarily worked by independent claimholders, providing for a fairly fragmented system of production, nonetheless accounting for in excess of £400,000 in diamond exports in 1871. The following year diamond production surpassed £1.6 million, opening up greater possibilities of capital investment. Resultantly the early 1870's saw a number of small companies forming, but with restrictions on racial claim ownership, in turn leading to the unsuccessful 'Black Flag Revolt' of 1875. Following a radical drop in diamond prices in 1876 diamond merchants were able to raise funds to purchase more claims – a time which marked the beginning of company

formation and industrialized mining, directly associated with large scale infrastructural (primarily transport) development in South Africa and further north. To give a simple example of development in the industrialized mining sector at the time: 16 steam engines employed on Kimberley's mines in 1877 were increased to 306 in 1881. As early as 1872 work also commenced on connecting Kimberley by rail to cities along the Cape Colony's coastline, then under management of the Cape Government Railways, with the line between Cape Town and Kimberley completed in 1885.

Between 1877 and 1885 British Imperial troops conquered many a Xhosa, Zulu, Pedi and Tswana polity, described by Mabin (1986) as resulting in a '...“willingness” by large numbers of Africans to be recruited into laboring jobs at minimal pay.' An emphasis on company formation, increasing numbers of 'cheap' wage laborers (associated also with theft on the mines) and the 'boom-and-bust' of the share mania led to ownership of the mines being in the hands of less than 12 companies by 1883. Depression marked the period 1883 to 1885 – share price dropped from 30s in 1882 to below 23s in 1883, with a direct effect on capital – labor relationships: Unemployment numbers rose drastically and employers took advantage of radically reduced wages, employing minimal employees, with tighter control taken over both White and Black workers. Increasing racial labor division, directly associated with remuneration became prominent, characterized by higher wages reserved for White employees than their Black counterparts. This resulted in an adverse statistic with reference to job losses. From employment of 3,900 laborers on the Kimberley mines in 1881 to a mere 1,210 in 1884, with a lesser percentage of Black job losses than White job losses, a direct result of lower Black wages. Company restructuring to reduce production cost became progressively imperative. 1883 saw the introduction of a system of formally searching mine workers after each shift with working hours strictly monitored. Companies increasingly focused on formalization of housing to further monitor their work force: Compound housing, townships and workers villages were increasingly supported and later imposed by company policy, with aspects thereof successively formalized by law.

In 1888 Cecil John Rhodes became chairman of the newly founded De Beers Diamond Mining Company (DBDMC), and soon thereafter focused his attention on the then French owned portion of the mine, the Compagnie Francaise des Mines de Diamants du Cap de Bonne Esperance. An agreement between Rhodes and Barney Barnato ensured the French mine in ownership of Barnato in 1889, with a significant shareholding by Rhodes. Shares in the mine quickly rose from £14-£49, but overproduction soon resulted in the market hitting an all-time low upon which Rhodes proposed to merge the DBDMC with the Kimberley Central Diamond Mining Company (KCDMC), forming 1 consolidated company, De Beers Consolidated Mines. A shareholder appeal to the merger was granted by court, resulting in KCDMC being liquidated and bought by De Beers Consolidated Mines. Soon thereafter De Beers Consolidated Mines also purchased the Bultfontein and Du Toitspan mines, thereby establishing a monopoly over the Kimberley mines that were to last for decades to come.

Later Colonial Period history of Kimberley includes the Siege of Kimberley in 1899, during the Anglo-Boer War (1899-1902). Apartheid and Struggle histories are well awarded on the town, but these well post-dates timeframes applicable to the Samy's Wholesalers Extension, Erf 44500 study site.

Two hypotheses regarding the presence of burials and human remains on Erf 44500 can be put forward. The current hypothesis, that Erf 44500 forms part of an early 'Black' migrant worker cemetery, dating to the 1870's, and having become defunct circa. 1879, was 1st postulated by Morris (2004) after the discovery of 4 graves at 78 Transvaal Road, in the parking lot of the Samy's Wholesalers depot. At the time Morris proposed that the area be conserved and declared as a Provincial Heritage Site (PHS). Morris' hypothesis was supported by more informal accounts of skeletal remains having been discovered/present at the Diamantveld Primary School property, situated between the Pioneer Cemetery (Beit Street) and Quinn Street, with further oral reports on skeletal remains from the general Transvaal Road area. Archival evidence, a March 29, 1879 Diamond News newspaper report (DN 1879) reports on cemeteries in the area:

'Report on the Sanitary Condition of Kimberley – Burial Grounds' 'Within the Municipality there are three burial grounds: -

1) The cemetery, which is used for Europeans and coloured people only. This spot about 5 acres in extent, is situated on the Transvaal Road below the goal. Neatly surrounded by a wall, the regularity with which it is laid out, the order everywhere exhibited, and the perfect state in which the grounds are kept, reflect great credit on the Committee to whose management it is entrusted. We observe that the graves were dug to a fair depth, and that sufficient space was allowed between each. 2) The burial ground for natives – This is situated in close proximity to the European cemetery, a very different state of matters, however, exists here. The digging of these graves is entrusted to black convicts and native police (who by the way employ the Sabbath for the purpose) without any white supervision, so the near residents informed us, consequently little or no uniformity of arrangement can be expected or is it to be found. The graves seen by us 'ready-made', awaiting their dead, were of a depth totally inadequate to prevent the effects of decomposition becoming apparent, even to passers-by. Those we examined were extremely shallow, varying in depth from two feet to three feet four inches, and were only from six to eight inches apart. A gentleman residing near told us he had on several occasions, on measuring, found the bodies within six inches from the surface and had also observed them lying exposed to the surface for two to three hours awaiting burial. As these bodies are buried without coffins, and as the soil in that neighborhood is of a loose nature, decomposition rapidly sets in. Heavy rains had just fallen previous to our visit, and the effluvia from the graves were simply horrible. In some places funnels had even been established by the water to the putrifying mass beneath. Six hundred and four natives were interred here during the past year, and we consider it a matter for which to be thankful that the prevailing winds come from a quarter that waft these pernicious smells from the camp, otherwise with this glaring neglect of all sanitary precautions, dire consequences must ere this have ensued. 3) The remaining burial ground situated midway between Kimberley and Old de Beers, on the left of the road has been in disuse for several years; unprotected from desecration by either wall or ditch, trampled over by pigs and cattle, it is a crying disgrace to the civilized portion of this community. The recommendations we have to make on this subject relate only to the Kafir burial ground, and we would suggest –

- 1) That the graves be dug in regular order.*
- 2) That they be dug to a depth of not less than five feet.*
- 3) That a space of at least two feet be allowed between each.*

- 4) *That the area allotted for this native burial ground be either enclosed by a wall or encompassed by a bank and ditch.*
- 5) *That the residents in the neighborhood be cautioned against drinking water from the wells in the near locality.*
- 6) *That the bodies be buried at once on being brought to the graveyard.*
- 7) *And lastly, That no more internments take place at the present site, but that a new locality at a further distance from the Township be at once chosen as a burial ground for the native population.'*

The initial discovery of graves at 78 Transvaal Road, coined with archival evidence led Morris (2004) to postulate the hypothesis that the Erf 44500 area and surrounds form part of the 'Black' migrant worker cemetery referred to in the DN 1879 report. With reference to the 78 Transvaal Road graves Morris (2004) states: *'The four graves lay in a regular row and, together, are highly suggestive that this site is part of a larger burial ground. ...geographically, it corresponds with the locality indicated in the 1879 report, and the graves found are all unexpectedly shallow.'* Morris (2004) continues: *'Subject to further findings, it could be that there are up to four to five thousand burials in this relatively informal 1870's African pioneers burial ground.'* The report highlights the problematic concern that the boundary of the said cemetery is unknown, but addresses, at least in part, adherence to the 7th recommendation regarding the 'Black' cemetery; Morris (2004) states: *'Burials subsequently took place at a spot which in 1883 was officially proclaimed as the new Gladstone cemetery.'* The Morris (2004) report contains additional useful information. With reference to stratigraphy it can be inferred that loose Hutton sand overlies a *'consolidated calcified sand / calcrete'* member situated roughly 60-65cm below the surface and that graves were dug into this member, at shallow depths, roughly 12cm in the case of Graves B and D, 20cm in the case of Grave C and with the deepest grave being grave A, dug approximately 35cm into the calcified member'. Additional unmarked graves were discovered along Lawrence Street during a Neotel development. Nine (9) graves were exhumed during the 2012 Phase 2 mitigation. Two graves, including a 'family grave' comprising 2/3 individuals and 1 additional grave containing remains of a single individual were found in direct proximity, on the sidewalk of Erf 44500. An additional 5/6 graves were uncovered further north along Lawrence Street. No graves were identified along the Quinn Street section of the Neotel development.

Work by Morris in 2004 attracted noticeable commercial media attention with his hypothesis receiving wide recognition, inferred to have only been reinforced by the further skeletal discoveries in 2012, to a level where the hypothesis seems to have almost become 'fact': A Volksblad (5 January 2015) article reporting on the Samy's Wholesalers Extension development boasts the heading: *'Sakeman tussen twee vure oor bouwerk op grafte'* [**Businessman between two fires over construction impact on graves**]. The article continues, *'Daar is vermoedelik oorskot van die stad se eerste Swart trekarbeiders onder die grond' ... 'Verskeie geraamtes is voorheen onder Samy's Cash & Cary se geboue en parkeerterrein...gevind'* [**Subsurface skeletal remains of the city's first Black migrant workers are expected at the site... a number of skeletons have been discovered from under Samy's buildings (?) and at the Samy's parking lot**]. The almost conviction of the site in question being the 1870's 'Black' migrant worker cemetery is extended to the heritage management arena: *'The site in question is said to be 100%*

cemetery, 1870's African burial ground in Kimberley North... recommended for heritage site declaration in 2004'

(NBYKB 2014) and 'It is therefore required that a new heritage report should be commissioned that would focus on the impact of the warehouse extension on the historical cemetery' (SAHRA 2015a). Despite the general sensitivity of the greater area with reference to formally mitigated skeletal remains, the 78 Transvaal Road and the Neotel remains along Lawrence Street, as well as more informal oral reports on additional graves, not all development in the area have exposed graves: In 2004 during construction of the Samy's Wholesalers depot development Pillay reported on skeletal remains, first to the police, with the case referred to the McGregor Museum upon verification of the remains being of archaeological and not forensic context. A 2008 extension to the Samy's Warehouse depot development yielded no skeletal remains. Two (2) swimming pools have been constructed in recent years in the immediate neighborhood, 1 in Lawrence Street and 1 in Grewer Square Street, neither of which have, according to resident reports, yielded human remains. The absence of skeletal remains along the Quinn Street portion of the Neotel line has already been mentioned. This in turn was supported by Sol Plaatje Municipal information: No graves were reported on during the 1980's construction of Quinn Street.

However, the absence of a report on graves should not be interpreted as confirmed 'evidence of absence'. Municipal staff directly involved in the Quinn Street development is no longer in the employ of the municipality and different legislation and practice were in place (Pers. Comm.: Mike Steyn, Sol Plaatje Municipality). Steyn reported on SPM records relating to a 1940's residential development of the immediately affected area. The 1980's development of Quinn Street resulted in the demolition of residences situated on then Erf 7542 and Erf 7543, with portions of these erven now forming part of Erf 44500. Reports also indicate that a creamery was known to be situated in the area, roughly 60 years ago (Pers. Comm.: Gabriel Goa, Kimberley resident), serving to further sketch the 1940's Colonial Period urban landscape of the immediate area.

Maps of early Kimberley are difficult to come by, more so maps that can assist in verifying the area in question as part of the inferred 'Black' migrant worker cemetery or not, or assist in demarcation of the boundaries thereof. The often problematic, albeit largely complimentary interdisciplinary sciences of history and archaeology, with their varying emphasis specifically on primary data type; history with its focus on the written or documented record and archaeology, with excavation being the primary method of data retrieval, are not lost on the case of Erf 44500, Kimberley. Further difficulty in resolving the issue of the 'Black' migrant worker cemetery is the general lack of information. Morris (2004) provides some direct excavation and limited archival information.

In order to provide a framework for analogy, comparison and discussion it is, despite the lack of information, necessary to construct a rough site description. The DN 1879 description of the 'Black' migrant worker cemetery being 'in close proximity' to the European cemetery, interpreted by Morris (2004) as being situated 'north' of the European cemetery is for purposes of a preliminary site description taken as correct, with north being anywhere north of the European cemetery, including directly north, directly north and cross-cutting Quinn Street, directly north of Quinn Street or somewhere north of Quinn Street. Morris (2004) also focuses description on the number of skeletal reports from the general Transvaal Road (Phakamile Mabija Road) area. A rough western border for the cemetery site can

loosely be defined as in the vicinity of Transvaal Road, including areas west and east thereof, implying that Transvaal Road may in fact run through the cemetery, but with the majority of actual skeletal data coming from the area immediate east thereof. The DN 1879 report states that graves were dug between 15-20cm (6-8 inches) apart. The report further states that 'Six hundred and four natives were interred here during the past year...' and also reporting on the fact that the cemetery in question was not the 1st cemetery, an earlier, already defunct a good few years prior to the DN 1879 report was commented on. It can thus reasonably be inferred that the cemetery in question was used for approximately 8 years. If an estimate is taken of approximately 600 burials per year over 8 years, equaling 4,800 graves in total ($600 \times 8 = 4,800$), then Morris' description of an expected 4,000-5,000 graves seems very accurate. If an estimate of approximately 3m^2 is assigned to each grave, considering described close proximity then 600 burials over an 8 year period at 3m^2 per grave gives an estimated cemetery site size of 1.44ha ($600 \times 8 \times 3\text{m}^2 = 14,400\text{m}^2$ or 1.44ha) for the site in question. Should a slightly more lenient grave size be considered, say 4m^2 , then proposed cemetery site size can reach 1.92ha ($600 \times 8 \times 4\text{m}^2 = 19,200\text{m}^2$ or 1.92ha). In conclusion the estimated 4,800 graves comprising the 'Black' migrant worker cemetery may well be inferred to relate to a rough 1.4-2ha cemetery site area. Chief Surveyor General (CSG) maps of early Kimberley are basically divided between Kimberley North, on the property Vooruitzicht 81 and then Beaconsfield (later Kimberley South), on the property Bultfontein 80. However, these maps serve little purpose in answering the type of Erf 44500 / 'Black' migrant worker cemetery site specific questions.

Mabin's (1986) paper, a notably informative publication on early Kimberley provides a more concise, demarcated map of early Kimberley, Beaconsfield, and surrounding areas and landmarks, including specifically mining areas, labelled in the publication as 'Map of Kimberley area circa. 1895'. The Mabin map indicates a number of 'open space' areas in the immediate vicinity of the Samy's Wholesalers Extension study site, including the Pioneer cemetery area, the area immediately north thereof, including the Erf 44500 study site and cross-cutting Quinn Street and also an adjoining area, north of Quinn Street and bordering Transvaal Road; all potential cemetery sites or portions thereof. However, it is important to read Mabin's map for the purposes for which it was redrawn: To indicate the then existing areas of Kimberley and how political and economic, and resultant socio-cultural aspects impacted on 'lifeway' and associated therewith settlement pattern, including the later location of compounds, locations and workers villages. It is important to take cognizance of Mabin's acknowledgements: *'The skills of Phil Stickler in drawing Figs 1 and 5...'*, with Figure 5 being the map in question. The redrawing is very similar in layout to the 1986 1:50 000 topographic map details of the area in question, limited to geographic boundaries of then known areas, but importantly not indicating the Quinn Street alignment. Significant though is the presence of the railway line running roughly along the modern day Quinn Street alignment on the 1941 1:50 000 topographic map, with the railway line between Cape Town and Kimberley known to have been completed in 1885. It can reasonably be inferred that this portion of the railway line, not forming part of the major rail alignment between Cape Town and Kimberley was completed at around the same time.

When one considers the 1879 Deduction Plan no 261 of Kimberley, Vooruitzicht 81, Deduction Sheets 6 & 7 is of direct significance. Deduction Sheets 6 & 7 indicates the greater Erf 44500 area simply as 'Deed of Grant - KimF1-12', but lacking site specific information. However, these deduction sheets are in themselves informative: By 1879 Transvaal Road was

basically laid out, so were street alignments towards the south of the Pioneer cemetery – including Cemetery Street to the south thereof. Of note is the boundary of the Pioneer cemetery, specifically the northern boundary, excluding the Jewish portion. Deduction Sheets 6 & 7 is indicative of early Kimberley being systematically formalized, with formalization inferred to be primarily based on preceding more informal land-use patterns. The early registration of a property in the direct vicinity of the Samy's 2008 site, with a road or access way indicated immediately south thereof is of significance; it may designate an early road or access way having been operational in the area as early as 1879, upgraded in 1885 at the latest for railway purposes. It is unlikely that such a large scale development would have impacted directly on a cemetery which became defunct at the most 6 years prior, at a time when it can reasonably be assumed that typical 'Black' or Later Iron Age (LIA) grave demarcations; simple stone cairns, stone markers or perhaps perishable (wooden) demarcations would still have been clearly visible, the deceased may still have been known to family and acquaintances living in and around town, and time alone would not have resolved DN 1879 reported on sanitary concerns. It can thus reasonably be inferred that the 'Black' migrant worker cemetery would have been situated either north or south of the 1885 railway line; either north or south of the current basic alignment of Quinn Street.

Merely 10 years later the 'Deed of Grant – KimF1-12' area was largely formalized: The railway siding was registered and the majority of the properties had private title deed registrations by 1899. With specific reference to the registered railway siding on the 1889 map, it is important to note that construction of the railway line must have been completed at least 4 years prior to its 1st inclusion in the 1889 survey diagram. Likewise it can reasonably be assumed that the residential area north of the railway siding, as well as development south thereof followed suit in formalization and registration. It is highly likely that informal settlement pattern formed the basis of 1889 lot layout and registration. Accordingly it can reasonably be concluded that it is highly unlikely, considering traditional LIA grave demarcation custom, time frames with specific reference to 'memory' of the deceased, the reported on DN 1879 sanitary concerns and increasing capital – labor conflict and up-rises reported on by Mabin (1986) during the 1880's, that at most 10 years after a cemetery had become defunct development would have been imposed on the locale.

Interesting in the 1889 Kimberley diagram is the area to the south of the railway siding: For the 1st time a small 'Jewish cemetery' section is added to the European cemetery, directly north-east of it Beit Street, and across from Beit Street to the north-west a school and south-east thereof, between Beit Street and the railway siding an area demarcated as Lot 88-104. Geographically the Lot 88-104 area conforms to the description in the DN 1879 report: 'The burial ground for natives – This is situated in close proximity to the European cemetery...', with 'close proximity' then implying 'north, across Beit Street'. CSG records for the Lot 88-104 property don't include geo-referenced details; however a rough estimate would designate a property size of approximately 1.3+ha; very close to the minimum calculated site size bracket, 1.44-2ha, for the approximate 4,800 graves of the 'Black' migrant worker cemetery. The Lot 88-104 area today forms part of the Diamantveld Primary School. The school opened its doors in the beginning of 1938 (Pers. Comm.: Mike Steyn, Sol Plaatje Municipality), allowing for an approximate 59 year period from the time the 'Black' migrant worker cemetery became defunct to development. 59 Years approximates to roughly 2 generations. It is likely, considering weathering of traditional LIA grave demarcations, the recorded high rotational flux in Kimberley's early population,

described as early as 1874 by Tyamzashe as: ‘... you will see hundreds of them leaving the fields, and as many arriving... almost every day’ directly related to time frames associated with ‘memory’ of the deceased and the greater time afforded natural rehabilitation of sanitary concerns reported on in 1879, that ‘memory’ of, affection with and visual demarcation of a ‘Black’ migrant worker cemetery may well have been lost on 1930’s development planning. It is proposed that the 1889 demarcated Lot 88-104 represents the 1879 reported on ‘Black’ migrant worker cemetery. The proposal is supported by, albeit mainly oral records of skeletal remains having been found at the site locale (Morris 2004).

When the 1889 diagram is compared with the 1941 topographic map slight further additions along the northern boundary of the Pioneer cemetery is evident, with small sections added to both the Jewish and European sections thereof. These additions by implication came with slight alteration to Beit Street. It can be inferred that despite early Kimberley layout having en large dictated modern layout of the town proper slight alterations to alignments and associated land parcel sizes may well be expected.

Hypothesis 2 argues that Erf 44500 was part of an early Black residential area with identified graves reflecting LIA burial custom of burial at a homestead. Historical documentary evidence, primarily based on cartographic CSG Records of early Kimberley en large serves to demystify the hypothesized unknown location of the DN 1879 reported on ‘Black’ migrant worker cemetery, with the locale of the cemetery proposed to be the demarcated Lot 88-104 area, fitting with the 1879 geographical description of the cemetery being ‘in close proximity’ to the European cemetery, early Colonial Period government standards of record keeping; lot demarcation and registration, and with Lot 88-104 meeting site description requirements with reference to expected number of burials, directly equated to estimated site size. Demystification of the hypothesized unknown location of the 1879 reported on ‘Black’ migrant worker cemetery however does not explain the presence of skeletal remains north of Quinn Street; to date with remains of 4 individuals mitigated from the Samy’s Wholesalers depot parking lot and 9 skeletons exhumed from the Lawrence Street section of the Neotel development.

Mabin (1986) provides for a possible explanation: *‘When the introduction of closed compounds was first mooted in the late 1870’s, the Black population of Kimberley resided in three different environments: at workplaces, on residential streets of the town itself, and in the locations. Locations remained small until about 1880, but grew rapidly with the onset of the recession.’* Further thereto *‘There had been a degree of spatial segregation between various groups in Kimberley from early in its history. Some of the earliest “locations” on the outskirts of Kimberley were semi-rural in nature, with sheep and cattle kraals whence Koranna and Tswana producers supplied milk and meat to the mining camps. Most of the land in and around the camps was owned by the London and South African Exploration Company. By 1874 this company had allowed or encouraged the emergence of locations, occupied mainly by Africans. In April 1875, the company allocated a location site where Kimberley’s railway station was built a decade later. Africans were encouraged to move to this site from the town by a stand rent of 2s 6d, only a quarter of the rent demanded in the town proper. However few seem to have done so, for in July 1876 there were said to be only 400 hut owners in all of the several locations. In the wake of a rebellion by part of the population of the territory surrounding Kimberley in 1878, the government proclaimed Cape law relating to locations to be in force in Griqualand West.’*

For purposes of this discussion Mabin (1986) concludes: *'The residential circumstances of the Kimberley workers were extremely varied, and to some degree reflected the diverse origins of the working class as well as its diverse employment Patterns'*. It is suggested that the residential area east of Transvaal Road and north of Quinn Street, encompassing the Erf 44500 study site was an early primarily Black residential area, perhaps during the late 1860's and throughout the major part of the 1870's. Grave sites encountered to date conform to widely practiced Later Iron Age (LIA) burial custom of burial at a homestead with specific cognizance to Kimberley's 1889 recorded layout; with graves encountered identified on the rough perimeters of former lot stands. In accordance it can reasonably be inferred that more graves will be present in the area, expected to be fairly strategically placed towards the outer perimeters of early stands and varying in number per stand. 1889 Formalization of the layout is inferred to have had its roots in earlier, less formal settlement pattern: Layout may reflect recording of a primarily Black residential settlement pattern at the time. More likely it may reflect the formalization of a development renewal program, with its basic layout adopted from the preceding settlement pattern. An 1889 development renewal program, based on a largely adopted layout, would be in striking accord with the 1940's 'residential' development, effectively little more than a residential renewal program, again with minimal effect on basic layout of the immediate area.

Burial at a homestead is a widely practiced cultural custom amongst people of LIA cultural tradition, not limited to South Africa but extending beyond the borders thereof, with specific reference to the 'migrant' Black population of early Kimberley not having been limited to 'South Africans' only. It is a custom practiced to this day, most evident across the rural landscape but extending to fairly formalized villages. Many a village today is characterized by a cemetery, in many cases more than one, alongside with burial at homestead yards – with burial type thus largely guided by choice. A similar type scenario cannot be excluded from early Kimberley life; the reported on 'Black' migrant worker cemetery does not exempt early Kimberley from widely practiced culturally guided burial at homesteads. On the traditional LIA cultural landscape, amongst the various LIA groups, burial is guided by 'male' and 'female' space associated with various aspects of the homestead surrounds, at homesteads with temporal depth of occupation resulting in small 'cemeteries' situated at various on-site locales. Burial at the homestead is closely associated with the practice of ancestral appeasement, a practice that nurtures the relationship between the living and the dead, for purposes of this discussion directly reflecting on traditional respect for, and associated therewith the conservation of graves.

LIA burial is by custom shallow, or shallower; the concept of '6ft under' is essentially European in origin. In the vicinity of Erf 44500, inferred to also be the case at the nearby Lot 88-104 area, depth of burial is expected to also be to a degree dictated by the underlying geology; the 'consolidated calcified sand/calcrete' member situated at approximately 60-65cm below the surface. A hard calcified stratigraphic layer may well have contributed to generally shallower graves in an area where grave depth is not prescribed by custom or religion. With reference to the custom of burial at homesteads cognizance need to be taken that more than 1 grave at a homestead often result in the formation of small on-site cemeteries, the arrangement of graves in these cemeteries more than often done in row-like format. Small rows of graves are not inconsistent with homestead burial practice; with

specific reference to the Black residential area in question, perhaps more so in the culturally translated smaller confines of an urban 'lot' environment.

As reported on by Mabin (1986) the 1870's, and more so the onset of the 1880's, saw an increasing emphasis on the removal of Blacks from Kimberley town to demarcated areas on the outskirts thereof, be it compounds or locations, first by means of largely company 'encouragement'; lower rent at location stands than in the town proper, but with relocation from 1878 onwards increasingly enforced by legislation. Changing political circumstances, with its associated socio-cultural repercussions resulted in a noticeable change in Black settlement pattern. As Blacks were removed from the town proper, they were also removed, in part, from their heritage, their grave sites situated in town – be it at the 'Black' migrant worker cemetery or at their former homestead lots. Once a community is removed from their heritage resources, with value and use systems breached, 'loss of memory' sets in faster. The essential 'migrant' makeup of early Kimberley's Black population, reflecting on already compromised and thereby more fragile tradition, coined with the removal of these people from their heritage resources is inferred to be key elements in rapid 'loss of memory'.

With consideration to the Lot 88-104 'Black' migrant worker cemetery having become defunct circa. 1879, with subsequent development on the site during the latter part of the 1930's, an approximate 59 year or 2 generation span, timeframes generally associated with 'loss of memory' is in vast discord with Indigenous Knowledge Systems (IKS) records. Both compromised LIA tradition and the removal of these people from their heritage resources are argued as variables that would have resulted in the rapid 'loss of memory'. Directly associated therewith would be weathering and loss of traditional LIA grave demarcations and the approximate 59 year period allowed for natural rehabilitation of 1879 reported on sanitary concerns. However, in the case of the 1930's development on the Lot 88-104 stand the impact or effect of political power in development decision making cannot be overruled.

ARCHAEOLOGICAL INVESTIGATIONS

The test excavations consisted of the following:

1. A 1m (wide) x approx.20m (long) trench (TT1) on the western portion of the erf running in a N/S direction (bordering Lawrence Street and next to the Neotel Line). **GPS: S28°43'52.4" E24°45'56.2"**.
2. Three test trenches (TT2 – TT4) running in an E/W direction, towards the eastern side of the erf and adjoining TT1. **GPS: S28°43'52.6" E24°45'56.2" (TT4); S28°43'52.4" E24°45'56.4" (TT3) and S28°43'52.2" E24°45'56.5" (TT2).**
3. Six Test Pits (TP1 – TP6), scattered across the central and eastern portion of the site, where limited known structural remains, primarily dating to the 1940's but not necessarily excluding earlier activity, were found during GPR scanning of the development area, with the aims of determining whether or not there were any evidence of a burial site/cemetery existing here prior to later developments. **GPS: S28°43'52.2" E24°45'57.3" (TP1); S28°43'53.0" E24°45'57.4" (TP2); S28°43'52.9" E24°45'57.9" (TP3); S28°43'53.3" E24°45'58.3" (TP4); S28°43'53.6" E24°45'59.0" (TP5) & S28°43'53.9" E24°45'59.3"**.

In addition to these test excavations and test pits, the foundation trenches (for the construction of the warehouse), running in an N/S and E/W direction across the site was also monitored and checked for the existence of any possible burials and other cultural remains. Cultural remains (in the form of building rubble and refuse such as glass, porcelain and others) were also recovered as part of the process.

Mapping/GPR Scanning

Terra Scan was appointed by Mr Tom Pillay to undertake a non-intrusive Ground Penetrating Radar (GPR) survey of Erf 44500 in order to establish the presence or absence of an old (1870's / 1879) cemetery or any other buried manmade structures on the site.

The Terms of Reference (ToR) for the identification of graves included:

- i. A consistent high-density pattern of subsurface disturbance that would reflect rows or row-like patterns of graves situated between 15-20cm (6 -8 inches) apart reflective of the study site forming part of the inferred cemetery 'site proper'.
- ii. A lower density pattern of subsurface disturbance that would reflect rows or row-like patterns of graves situated in excess of roughly 20cm (8 inches) apart or a random scatter of subsurface disturbance reflective of the study site forming part of the inferred cemetery but closer associated with 'perimeter' burials.
- iii. Individual or low density scattered subsurface disturbance that may reflect on Later Iron Age (LIA) burial practice of burial within a homestead yard.
- iv. At the time of the GPR scan surface Hutton sand had been removed to a level of 30cm below the contemporary surface and the site sealed with a fine gravel layer of 10-15cm providing for a GPR scan surface level of approximately 15cm below the contemporary surface.
- v. Stratigraphy of the site, based on archaeological excavation data from the immediate vicinity included a top Hutton sand level underlain by a 'consolidated calcified sand / calcrete' member, situated at approximately 60-65cm below the contemporary surface. The said member may be lense like, not continuing across the sub-surface extent of the study site or may be characteristic of the sub-surface geology of the study site.
- vi. Previously identified graves in the vicinity of the study site were dug between 10- 40+cm into the 'consolidated calcified sand / calcrete' member.
- vii. A 1940's residential development with confirmed evidence of impact on the western portion of the study site is available from the records of the Sol Plaatje Municipality. The 1980's development of Quinn Street resulted in destruction of the 1940's residences affecting the study site.

For practical scanning purposes the site was divided into three survey sections along its length. Block one is situated on the Western side of the site in the area demarcated by datum

points Z and Y, with the block measuring 17m x 40m. A total of 103 scans were performed across Block one. The block was scanned in a grid formation and 54 scans were performed in the South to North and North to South directions, 19 scans were performed in the West to East and East to West direction. A further 30 scans were performed across the anomalies that were detected during the onsite grid scan.

Block two is situated in the center of the site in the area demarcated by datum points Y and X, with the block again measuring 17m x 40m. A total of 74 scans were performed across Block two. The block was scanned in a grid formation and 45 scans were performed in the South to North and North to South directions, 23 scans were performed in the West to East and East to West direction.

Block three is situated on the Eastern side of the site in the area demarcated by datum points X and W and the block measured 17m x 36m. A total of 94 scans were performed across Block three. The block was scanned in a grid formation and 64 scans were performed in the South to North and North to South directions, 23 scans were performed in West to East and East to West directions.



Figure 1: Site Map. (GPS data recorded and map produced by ArchaeoMaps).

The technical details of the scans undertaken by TerraScan will not be repeated here, but the results will be summarized. The objects detected and marked out during the onsite survey represents linear objects that represents the remains of what is believed to be manmade

infrastructure such as building foundations described in the ToR (vii), the ground disturbance that were detected was relatively shallow and on top of the change in geology situated at a depth of ± 56 cm below ground surface, the mentioned change in geology corresponds with the ToR (v) and extends across the sub-surface extent of Erf 44500.

During the onsite survey, no consistent high or lower density patterns of subsurface disturbance were detected that could reflect rows or row-like patterns, or infrequent random scatters of graves as described in the ToR (i, ii, iii & vi), with grave-like disturbance inferred to be variable in size, primarily rectangular in shape, but which may approach 'square shaped' disturbances (double or multiple graves) and which may approach 'oval' shapes. No disturbance other than objects "A" and "B" penetrated the geological member situated at 56cm below ground surface. The data suggests that that object "A" is a void measuring 1.5 m x 0.7m situated at approximately 30cm below the surface, it extends down to a depth of 1m below surface. This object seems to have a flat surface area that suggests that it could be an old sewerage pit or other manmade void. Object "A" is situated 9.7m from the Quinn Street side-walk and 8.9m from the Lawrence Street kerb. Object "B" is situated on the sidewalk, 0.9m from the Lawrence Street kerb. The object measures 1.2m x 0.6m and is situated at a depth of approximately 48cm below the surface and extends down to a depth of 90cm below the surface. This object represents a similar GPR signature as a void but no flat surface is present in this position.

Through an analysis of the processed GPR data, no consistent high or lower density patterns of subsurface disturbance were detected that could reflect rows or row-like patterns of graves as described in the ToR (i, ii, iii & vi).



Figure 2: Location of the development on Erf 445500.

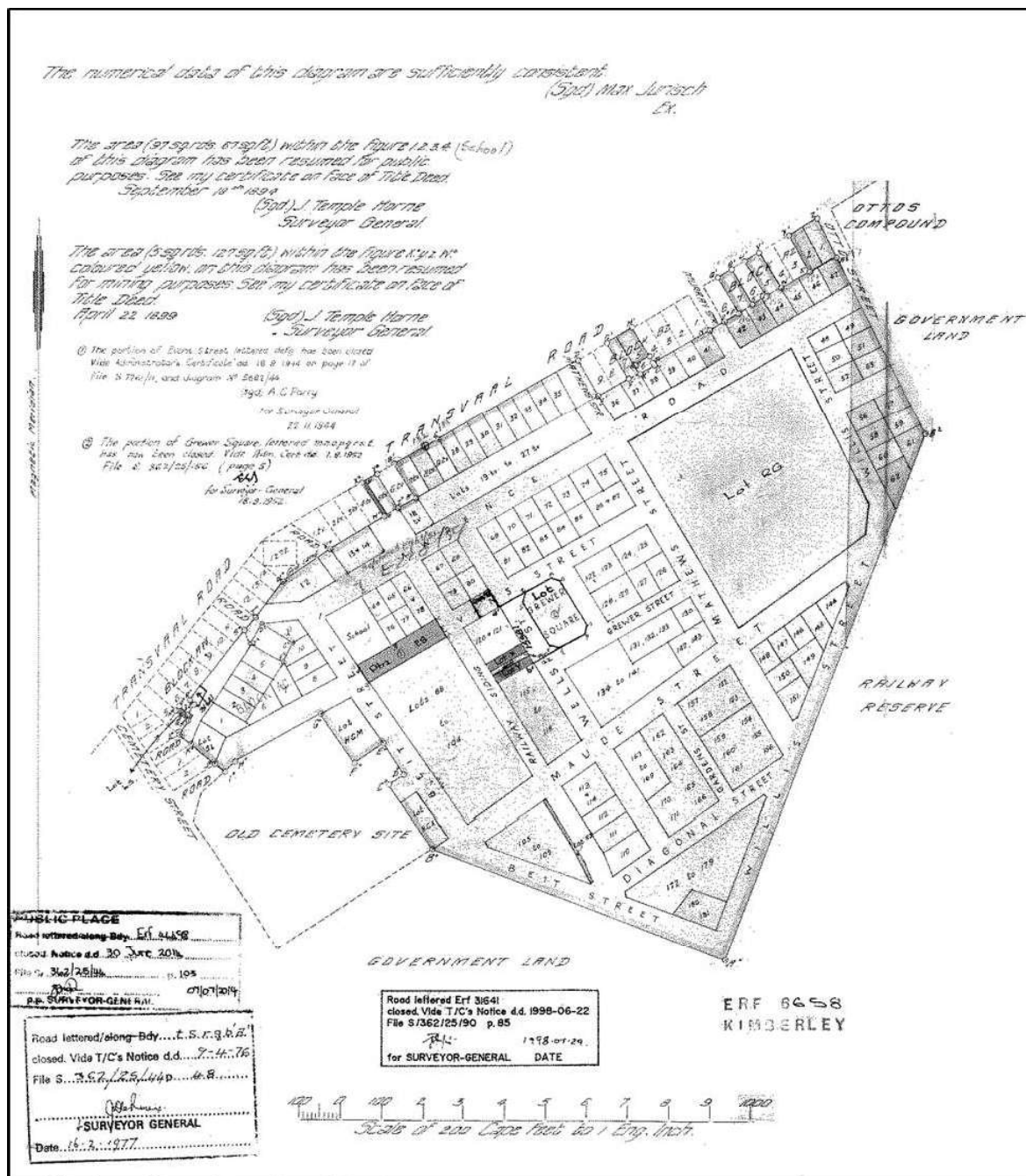


Figure 3: Extract from the 'Deed of Grant – KimF1-12' area, Kimberley North, 1889 (CSG Record 6658-8/1889).



Figure 4: The development area taken from Lawrence Street towards the east showing the foundations test trenches being dug.



Figure 5: A closer view of the foundation trenches taken down Quinn Street towards Lawrence Street.

Excavations

The monitoring of the foundation trenches (between 0.50m and 0.80m deep) revealed to some extent what was recorded on the GPR scans of the area previously, and that is that there are various structural remains and other disturbances in the area dating to the 1940's, with material cultural remains dating roughly to the 1870's-early 1900's. No evidence of burials pits were identified in any of these foundation trenches.



Figure 6: Some late 19th to mid20th century bottle glass from the foundations.



Figure 7: Teaspoons from Phillip Ashbury & Sons in Sheffield (UK) dating to the late 19th century. Small spoon uncovered during May 2015 Test excavation, larger spoon uncovered January 2015 (Van Ryneveld 2015).



Figure 8: Building rubble from the 1940's.

Test Trench 1 – Western section of Site (next to Neotel Line in Lawrence Street)

Although the trench ran next to Neotel's line, a section of the trench cut into the line exposing the Neotel line insertion. No evidence of any burial pits or unnatural disturbances was identified in the trench, with sterile gravel/shale found at a depth of between 0.80m and 1.20m (from the Present Surface Level or PSL) where the trenching was stopped. Some cultural material including glass, metal objects and building rubble was however recovered from depths of between 0.60m and 0.80m below PSL.

Test Trenches 2 – 4 – Western section of site running in an E/W direction

These trenches also revealed no evidence of any burials in this part of the development site, with no disturbances in the form of burial pits identified. Sterile gravel/shale was found at a depth of around 1.20m and more below PSL, with building rubble (1940's?), and other material such as glass and porcelain from the late 19th to early 20th centuries recovered as well. The amount of material is however very small. Each test trench was around 1.00m to 1.50m in size, excavated by TLB.

In Test Trench 3 some faunal and a possible human long bone fragment were recovered. Last mentioned long bone was broken in two (not during the 2015 excavations) and was clean, with no soil/dirt adhering to it. No other remains were recovered and it seems as if this bone could have been left behind during earlier work on the Neotel line mitigation. The bone was found in the western portion of TT3 on the edge of TT1 trench (Neotel line). This is however speculation and cannot be determined without a doubt.

Remnants of a fairly extensive rocky ridge were found in the eastern section of TT3, extending some distance towards the east and west thereof and extending across the majority of the western perimeter of the study site. Any excavation of burial pits in this part would have been very difficult, and if burials (even if shallow) were to have been dug here it would have been more towards the western portion of the now buried outcrops, as evidenced by the 2011 discoveries and removal of human remains on the Neotel Line running parallel to Lawrence street.



**Figure 9: Test Trench 1 prior to excavation.
The man-holes show the approximate Neotel Line connection.**



**Figure 10: TT1 being excavated.
A section of the Neotel Line connection was exposed.**



Figure 11: TT1 – Sterile gravel/shale found at around 1.20m below PSL.



Figure 12: Cultural material from TT1.



Figure 13: Bone and wood from TT2/3.
The one bone at the top could be human, but this is inconclusive.



Figure 14: Part of the remnants of a rocky ridge/seam in TT3.



Figure 15: TT2.

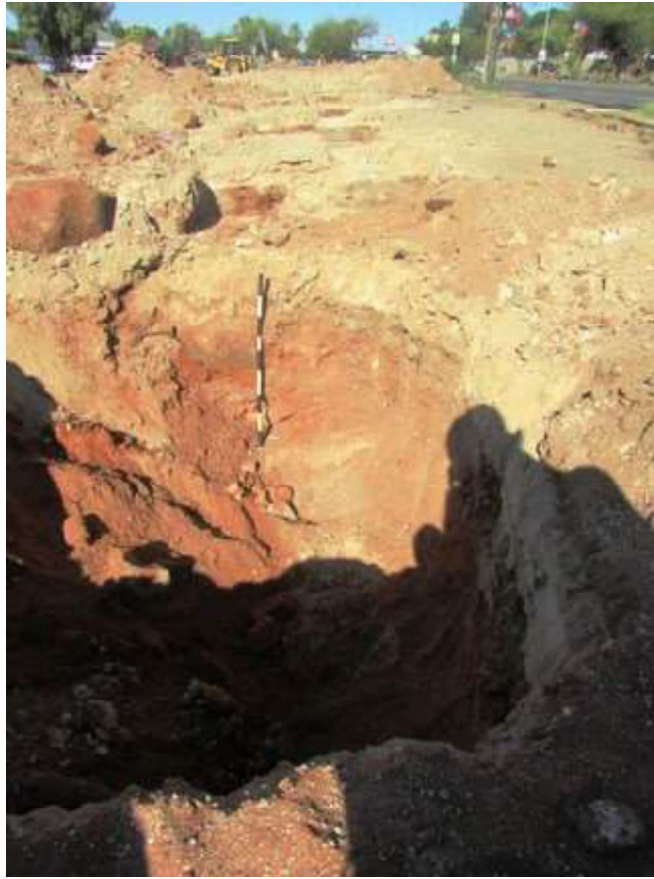


Figure 16: TT4.

Test Pits 1 – 6

All six test pits were around 1.5m (length and width) in size. The depth at which sterile gravel/shale was found in all of these pits range between 1.20m and 1.60m below PSL, except for TP6 where a concrete floor/slab was found at a depth of around 0.30m below PSL, interpreted as a type of station platform considering its location in relation to the railway siding and CSG surveyed demarcation (See map 10, Van Ryneveld 2015).

No indication of any burial pits was found in any of the Test Pits. What was however recovered, fairly consistently, throughout all of these pits (TP1, TP2, TP3), were sections of structures and building rubble, as well as ash and refuse pits between approximately 0.50m and 1.20 – 1.50m depth. If any earlier burial pits or a large cemetery existed here prior to this then it would have been expected to be below the 1940's structural remains: No evidence however exists. The cultural material from these Test pits ranges in age between the late 19th and early/mid 20th centuries.



Figure 17: Test Pit 1 – Part of concrete structure visible in eastern section of pit.



**Figure 18: Cultural material from TP2.
The bone is from a juvenile goat/sheep.**



Figure 19: TP2 - Building rubble visible on eastern side of pit.



Figure 20: TP3.



Figure 21: Cultural material from TP3.



Figure 22: Building rubble in TP4's north-western corner.



Figure 23: Ash and refuse layer in TP4's south-western section.



**Figure 24: Cultural material from TP4.
The ages range between the late 19th and early/mid 20th centuries.**



Figure 25: TP5.



Figure 26: Cultural material from TP5.



Figure 27: TP6.



Figure 28: TP6 – Note the concrete floor/slab that runs through the whole trench.



Figure 29: Cultural material from TP6.



Figure 30: Aerial view of site showing location/distribution of Test Trenches and Pits.

CONCLUSIONS AND RECOMMENDATIONS

In conclusion it is possible to say that the work on Erf 44500 in Kimberley, for the Samy's Wholesalers Warehouse Expansion development, was conducted successfully and within the requirements of the SAHRA BGG Unit permit issued for the Test Excavations within the western portion of Erf 44500 *“as this area is mostly likely to retain in situ graves”*.

A number of Test Trenches (TT1 – TT4) was excavated in the western-most portion of the site, next to the Neotel Line and adjacent to it where human remains were uncovered in 2011/12. No indication of burial pits in this area and further to the eastern section of this site was identified, with a single unidentified long bone section, possibly human, recovered from a section of TT3 most likely to be related to the earlier 2012 exhumations and not part of an in situ previously unrecorded burial.

The six Test Pits (TP1-6) dug across the central and eastern portion of the study site similarly revealed no indication of any burial pits or the existence of a cemetery. Structural remains, some picked up on the GPR scan and some indicated on early maps, dating to the 1940's, and cultural material from both this time period and the earlier late 19th to mid 20th centuries were found in the test pits. If these structures, residential or otherwise were in fact constructed on top of an earlier cemetery, then clear evidence of burial pits would have been uncovered in test pit section stratigraphies. No such evidence could be found.

Test pit data, combined with earlier GPR scanning evidence, indicate that it is unlikely that the proposed Samy's Wholesalers Warehouse Expansion development will impact on a cemetery or any unknown burials. The results of the Test Pit Excavations contribute to interpretation of the possible location of the 1870's Black migrant worker cemetery, but are limited to evidence that Erf 44500 is not the said locality.

Based on the results of the Test Pit Excavations it can be concluded that the proposed development of the Samy's Wholesalers Warehouse Expansion will not impact on any heritage resource, including the inferred cemetery site, or any significant cultural member. It is recommended that development proceed without further delay and without the developer having to comply with additional archaeological and cultural heritage compliance requirements.

REFERENCES

Aerial views of area, site location, distribution of Test Trenches & Pits: Google Earth 2015.

Barnardt, B. 2015. **Ground Penetrating Radar survey of Erf 44500 Corner of Quinn and Lawrence Streets Kimberley**. Undertaken on behalf of P&V Pillay Family Trust 23 - 24 January 2015. Unpublished Report TerraScan. January 2015.

Gaiger, S. 2014. **Heritage Impact Assessment Report for the Proposed Expansion to Samy's Wholesalers Warehouse, Kimberley, Northern Cape**. Unpublished Report G&A Heritage. For: Samy's Wholesalers. November 2014.

Morris, D. & Maureen Klemp with Petrus Wilson & Koot Msawula. 2014. **Skeletons Found and Salvaged along Lawrence Road and at the Quinn Street intersection, Kimberley.** Unpublished Report. McGregor Museum Archaeological Department. For: Neotel. Updated January 2014.

Van Ryneveld, K. 2015. **Archaeological and Cultural Heritage Impact Assessment – Samy’s Wholesalers Extension, Erf 44500, Kimberley, Sol Plaatje Municipality, Northern Cape.** Unpublished Report: ArchaeoMaps. For: SAHRA & Samy’s Wholesalers. February 2015.

ACKNOWLEDGEMENTS

We would like to acknowledge to following institutions and individuals for their assistance and support:

1. SAHRA’s BGG Unit, and specifically Me. Itu Masiteng, for her help and assistance in obtaining the required permit to undertake the work
2. Mr. Tom Pillay of Samy’s Wholesalers for his interest in and support of the work and his total commitment and willingness to the fruitful completion of the required heritage work,
3. and finally, Me. Jenny Halvatzis, our field assistant for her work and input in the process. It is highly appreciated.

Ground Penetrating Radar survey of Erf 44500

Corner of Quinn and Lawrence Streets

Kimberley

Undertaken on behalf of P&V Pillay Family Trust

23 - 24 January 2015

By

Barry Barnardt

Terra Scan CC

Tel: +27 733028381

Email: barry@terrascan.co.za

Internet: www.terrascan.co.za

Table of Contents:

1. Objective and Terms of Reference (ToR)	Page 3
2. What is Ground Penetrating Radar	Page 3
3. Equipment used	Page 5
4. Survey methodology and data acquisition	Page 5
5. Site map	Page 6
6. Site conditions	Page 6
7. On-site observations and findings	Page 7
8. Off-site data processing and 3D data analysis	Page 13
9. Limitations of results	Page 19
10. Conclusion	Page 20

1. Objective and Terms of Reference (ToR):

Terra Scan was appointed by Mr Tom Pillay to undertake a non-intrusive Ground Penetrating Radar (GPR) survey of Erf 44500 in order to establish the presence or absence of an old (1870's / 1879) cemetery or any other buried manmade structures on the site. Terms of Reference (ToR) for the identification of graves included:

- i. A consistent high-density pattern of subsurface disturbance that would reflect rows or row-like patterns of graves situated between 15-20cm (6 -8 inches) apart reflective of the study site forming part of the inferred cemetery 'site proper'.
- ii. A lower density pattern of subsurface disturbance that would reflect rows or row-like patterns of graves situated in excess of roughly 20cm (8 inches) apart or a random scatter of subsurface disturbance reflective of the study site forming part of the inferred cemetery but closer associated with 'perimeter' burials.
- iii. Individual or low density scattered subsurface disturbance that may reflect on Later Iron Age (LIA) burial practice of burial within a homestead yard.
- iv. At the time of the GPR scan surface Hutton sand had been removed to a level of 30cm below the contemporary surface and the site sealed with a fine gravel layer of 10-15cm providing for a GPR scan surface level of approximately 15cm below the contemporary surface.
- v. Stratigraphy of the site, based on archaeological excavation data from the immediate vicinity included a top Hutton sand level underlain by a '*consolidated calcified sand / calcrete*' member, situated at approximately 60-65cm below the contemporary surface. The said member may be lense like, not continuing across the sub-surface extent of the study site or may be characteristic of the sub-surface geology of the study site.
- vi. Previously identified graves in the vicinity of the study site were dug between 10-40+cm into the '*consolidated calcified sand / calcrete*' member.
- vii. [A 1940's residential development with confirmed evidence of impact on the western portion of the study site is available from the records of the Sol Plaatje Municipality. The 1980's development of Quinn Street resulted in destruction of the 1940's residences affecting the study site.]

The results of the GPR survey will be used by ArchaeoMaps in the preparation of an Archaeological and Cultural Heritage Impact Assessment (AIA).

2. What is Ground Penetrating Radar?

A GPR system is made up of a control unit, antenna, a power source and a trolley cart.

GPR is described by Geophysical Survey Systems, Inc as:

"The control unit contains the electronics which triggers the pulse of radar energy that the antenna sends into the ground. It also has a built-in computer and hard disk/solid state memory to store data for examination after fieldwork. Some systems, such as the GSSI DF, are controlled by an attached Windows computer with pre-loaded control software. This system allows data processing and interpretation without having to download radar files into another computer.

The antenna receives the electrical pulse produced by the control unit, amplifies it and transmits it into the ground or other medium at a particular frequency while the antenna moves across the ground surface. Antenna frequency is

one major factor in depth penetration. The higher the frequency of the antenna, the shallower into the ground it will penetrate. A higher frequency antenna will also 'see' smaller targets.

GPR works by sending a tiny pulse of energy into a material and recording the strength and the time required for the return of any reflected signal. A series of pulses over a single area make up what is called a scan. Reflections are produced whenever the energy pulse enters into a material with different electrical conduction properties or dielectric permittivity from the material it left. The strength, or amplitude, of the reflection is determined by the contrast in the dielectric constants and conductivities of the two materials. This means that a pulse which moves from dry sand (dielectric of 5) to wet sand (dielectric of 30) will produce a very strong reflection, while moving from dry sand (5) to limestone (7) will produce a relatively weak reflection.

While some of the GPR energy pulse is reflected back to the antenna, energy also keeps traveling through the material until it either dissipates (attenuates) or the GPR control unit has closed its time window. The rate of signal attenuation varies widely and is dependent on the properties of the material through which the pulse is passing.

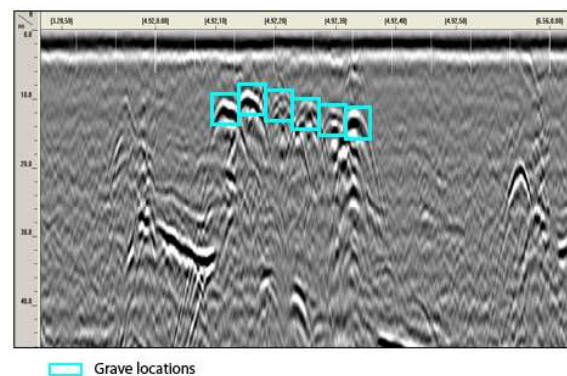
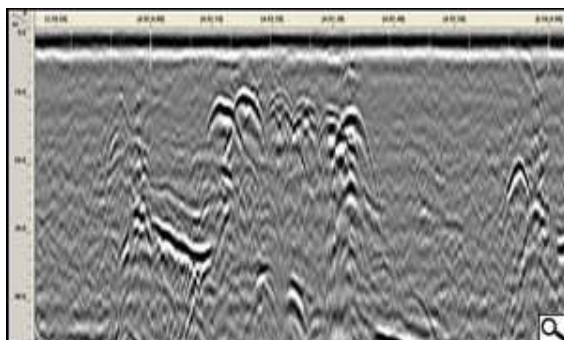
Materials with a high dielectric will slow the radar wave and it will not be able to penetrate as far. Materials with high conductivity will attenuate the signal rapidly. Water saturation dramatically raises the dielectric of a material, so a survey area should be carefully inspected for signs of water penetration.

Metals are considered to be a complete reflector and do not allow any amount of signal to pass through. Materials beneath a metal sheet, fine metal mesh, or pan decking will not be visible.

Radar energy is not emitted from the antenna in a straight line. It is emitted in a cone shape. The two-way travel time for energy at the leading edge of the cone is longer than for energy directly beneath the antenna. This is because the leading edge of the cone represents the hypotenuse of a right triangle.

Because it takes longer for that energy to be received, it is recorded farther down in the profile. As the antenna is moved over a target, the distance between them decreases until the antenna is over the target and increases as the antenna is moved away. It is for this reason that a single target will appear in a data as a hyperbola, or inverted "U." The target is actually at the peak amplitude of the positive wavelet." (<http://www.geophysical.com/whatisgpr.htm> - accessed on 26 January 2015.)

The example linescan radar images below identify several soil anomalies that equate the locations of remains during an archaeology survey. (<http://www.geophysical.com/archaeology.htm> - accessed on 26 January 2015.)



3. Equipment used to scan Erf 44500:

An UtilityScan DF system with cart serial number # 204, antenna serial number # 217 manufactured by Geophysical Survey Systems, Inc. (GSSI) was used for the survey. The DF system incorporates a digital dual-frequency antenna (300 MHz and 800 MHz) and a touchscreen interface that allowed shallow and deep targets to be viewed simultaneously in a single scan. The DF system has a maximum depth range of 5m depending on the soil conditions. The system has a signal floor tracking feature whereby the calculated penetration depth based on the site specific conditions was displayed.

4. Survey methodology and data acquisition on Erf 44500:

For practical scanning purposes the site was divided into three survey sections along its length.

Block one is situated on the Western side of the site in the area demarcated by datum points Z and Y as indicated in the Google earth image on page 4, the block measures 17m x 40m.

A total of 103 scans were performed across block one. The block was scanned in a grid formation and 54 scans were performed in the South to North and North to South directions, 19 scans were performed in the West to East and East to West direction. A further 30 scans were performed across the anomalies that were detected during the onsite grid scan.

Block two is situated in the centre of the site in the area demarcated by datum points Y and X as indicated in the Google earth image on page 4, the block measures 17m x 40m.

A total of 74 scans were performed across block two. The block was scanned in a grid formation and 45 scans were performed in the South to North and North to South directions, 23 scans were performed in the West to East and East to West direction.

Block three is situated on the Eastern side of the site in the area demarcated by datum points X and W as indicated on the Google earth image below, the block measures 17m x 36m.

A total of 94 scans were performed across block three. The block was scanned in a grid formation and 64 scans were performed in the South to North and North to South directions, 23 scans were performed in West to East and East to West directions.

5. Site Map. (GPS data recorded and map produced by ArchaeoMaps)

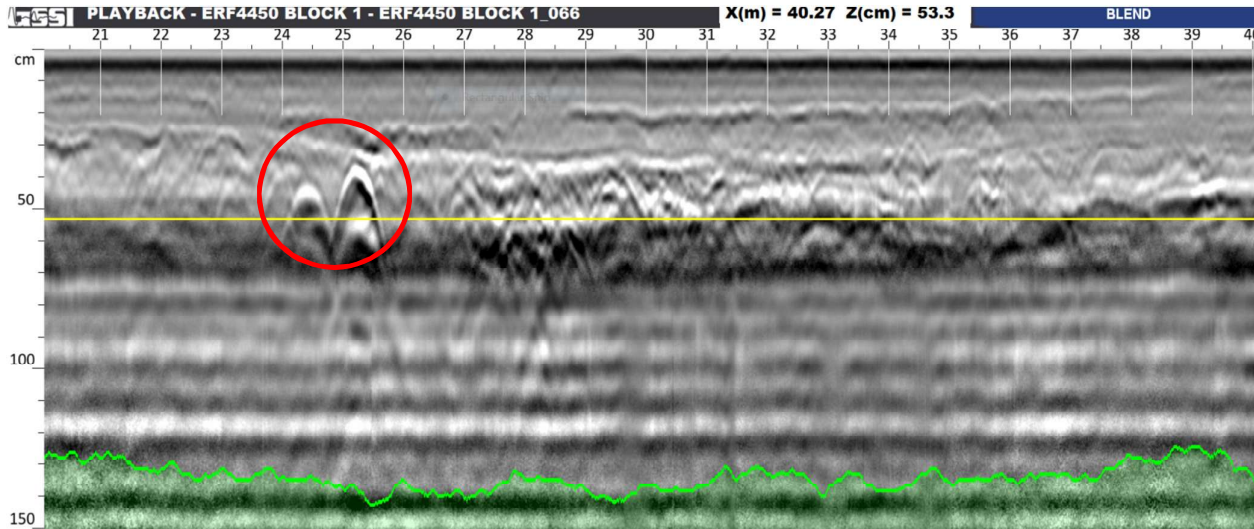


6. Site conditions and GPR penetration at Erf 44500:

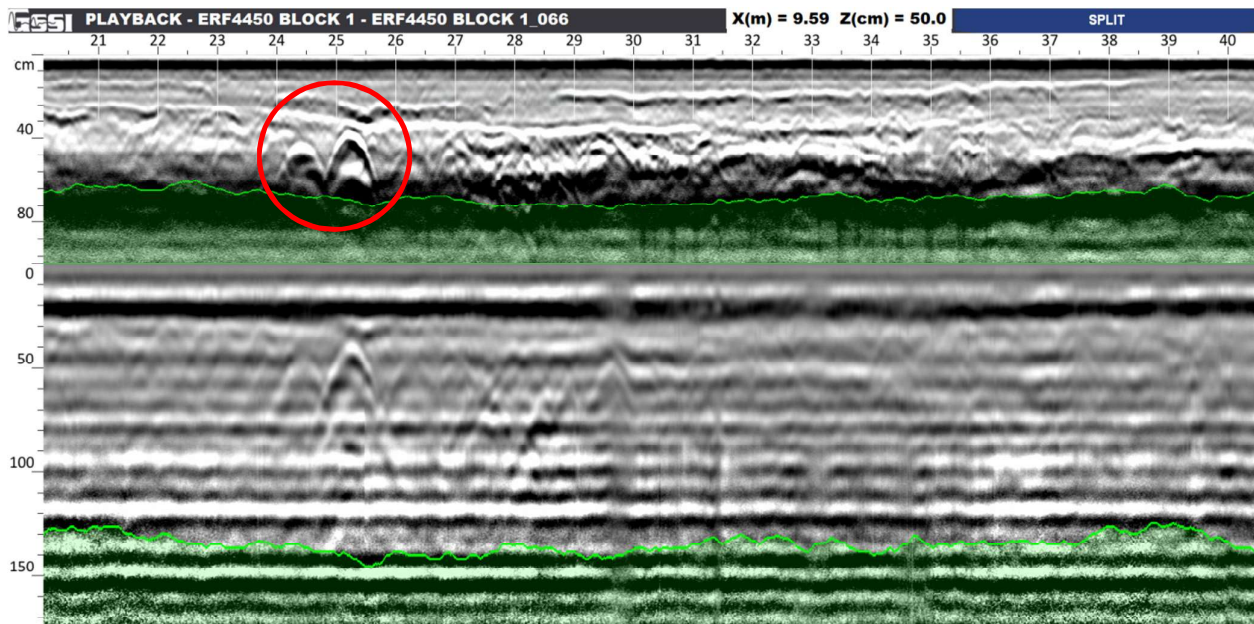
The surface layer of the area in question was disturbed when recent construction activities started on site, subsequently construction was stopped and the current top layer consisting of a soil and limestone mixture was introduced and compacted to seal the area. The working surface was in good condition at the time of the survey.

Penetration with the 800Mhz channel was relatively good up to 500mm as indicated by the signal floor tracking indicator, a change in geology across the entire area is evident at a depth of ± 56 cm. The calculated signal tracker indicated that a penetration depth of ± 1300 mm was achieved with the 300Mhz antenna as per the two examples below. The geology change at a 56cm below surface had an adverse effect on the visible image quality between 700mm and 1300mm. It is believed that the dielectric constant and conductivity of the soil changes dramatically at the point of change in geology as described above.

Blended channels



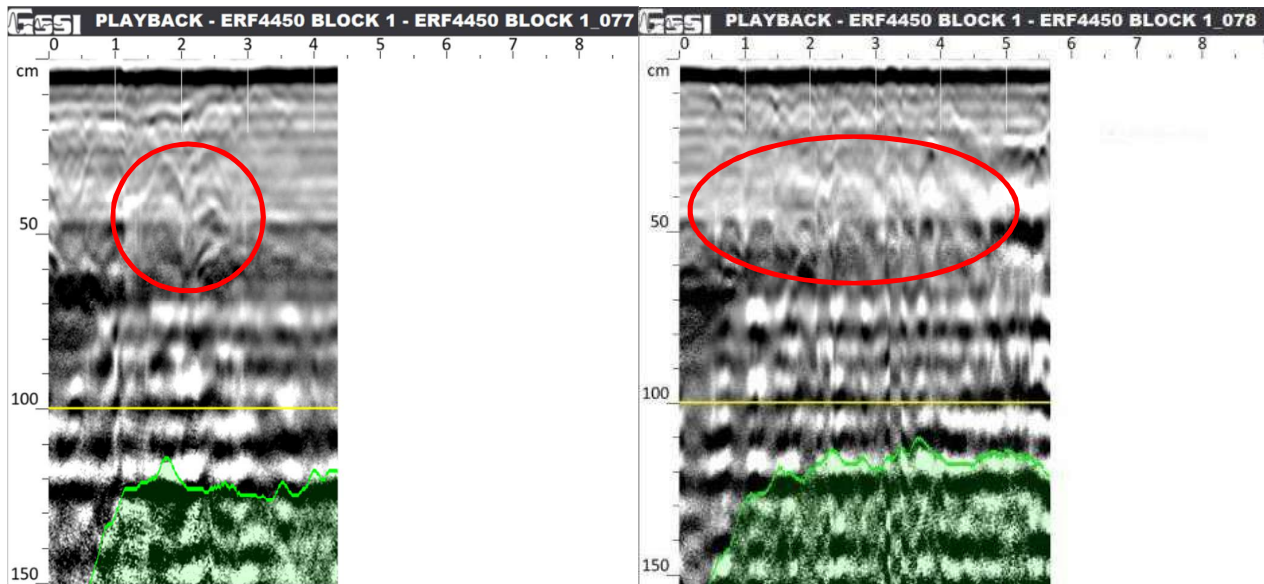
Split channels



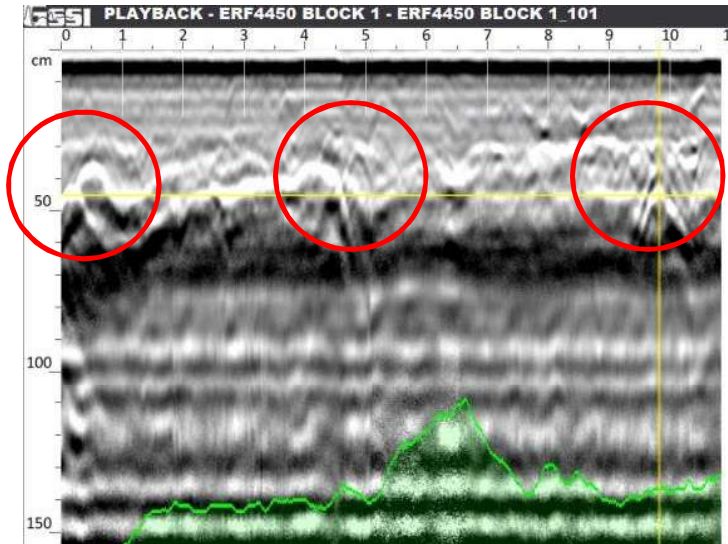
7. On-site observations and findings at Erf 44500:

During the on-site survey, several objects were detected at depths varying between 350mm to 500mm below ground surface. The location of these detected objects was recorded and is indicated on the Google earth image, the GPS coordinates of the indicated positions was recorded by ArchaeoMaps. The positioning and shape of the detected objects suggest that the detected objects are of a continuous nature and could represent the remains of old building infrastructure. Document proof exist that the area in question used to be a developed residential area. The findings are illustrated in picture format below.

General area of marked positions in block one: YB2, YC1, YC2, YD1 and YD2. During the on-site survey the area between YC1 and YB2, as shown below was identified as an area of interest.



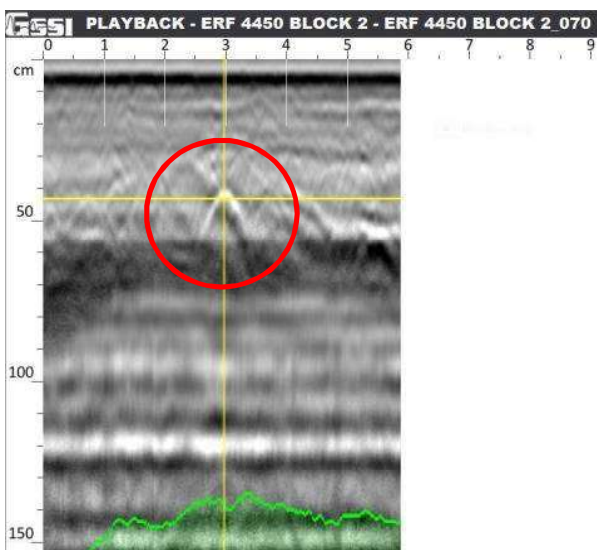
General area of marked positions in block one: YH1, YH2, YH3, YH4, YH5 and YH6.



General area of marked positions in block one: YG1, WE1 and XD1.



General area of marked positions in block two: XA1 and XA2.

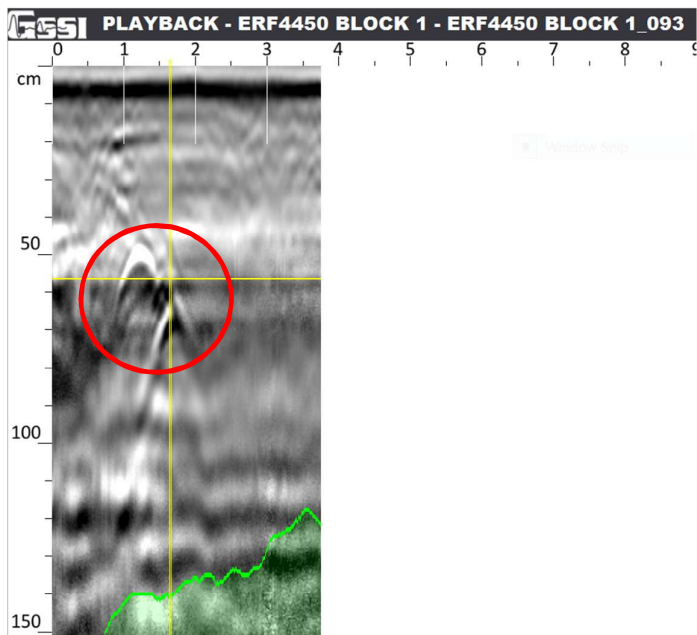




General area of marked positions in block two: XC1, XC2 and XB1.



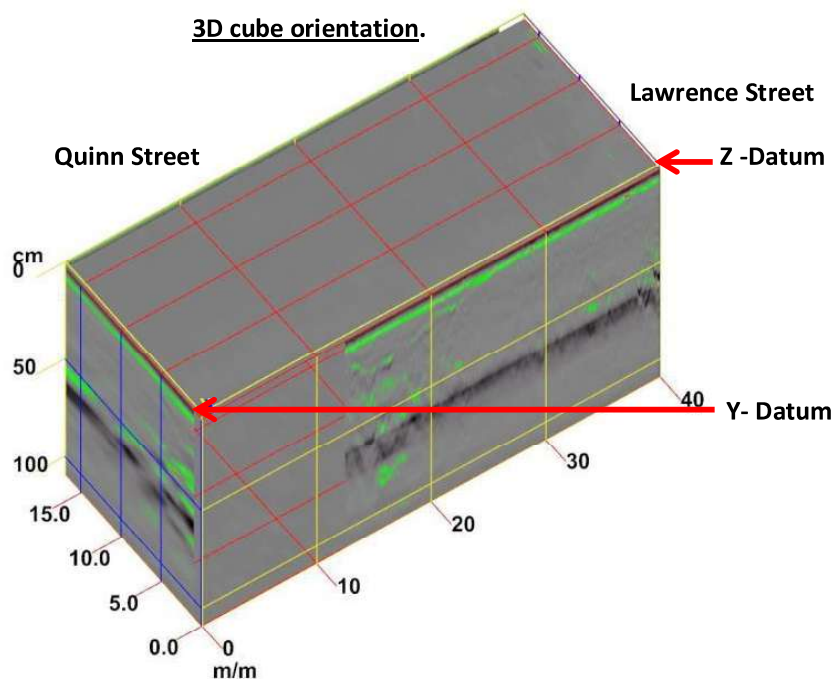
General area of marked positions in block three: WC2, WC1, WA2 and WB1.



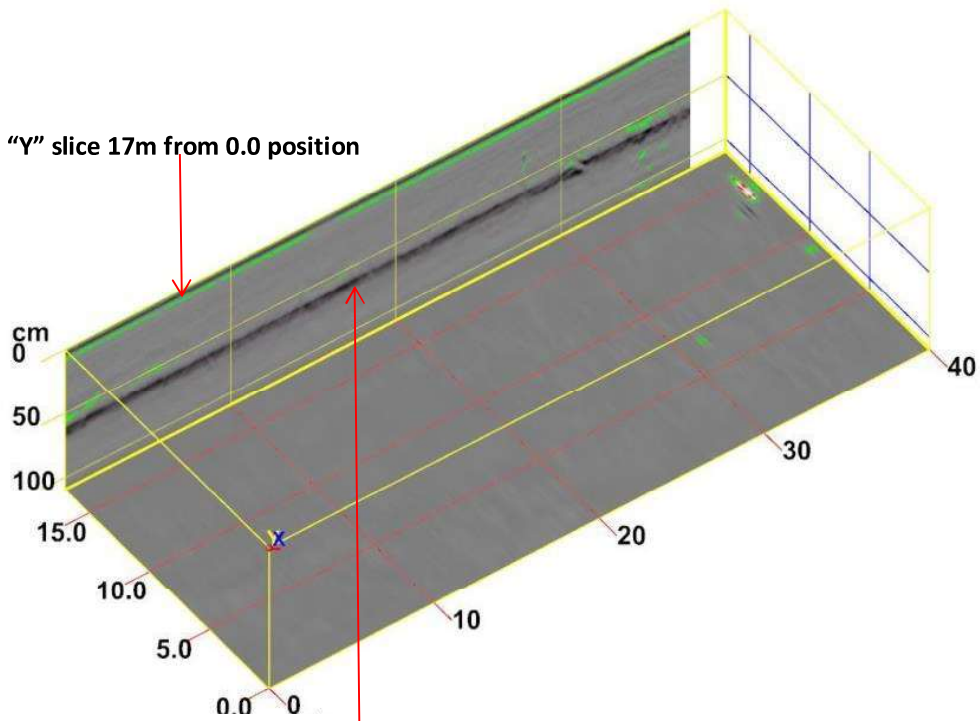


8. Off-site data processing and 3D data analysis of data collected at Erf 44500:

Given the majority of the detected objects are concentrated in Block one and in order to further identify possible voids or patterns of ground disturbance the data collected in this area was processed off-site using Radan 7, radar analyses software from GSSI. The processed data was used to build a 3D cube of Block one. The images below represent slices along the X, Y and Z planes of the 3D cube.

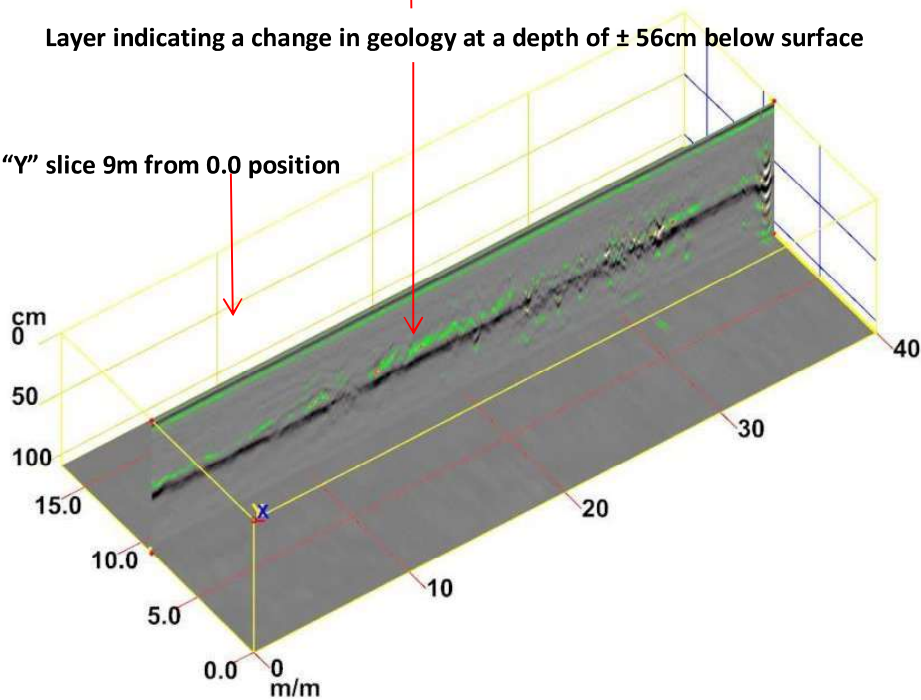


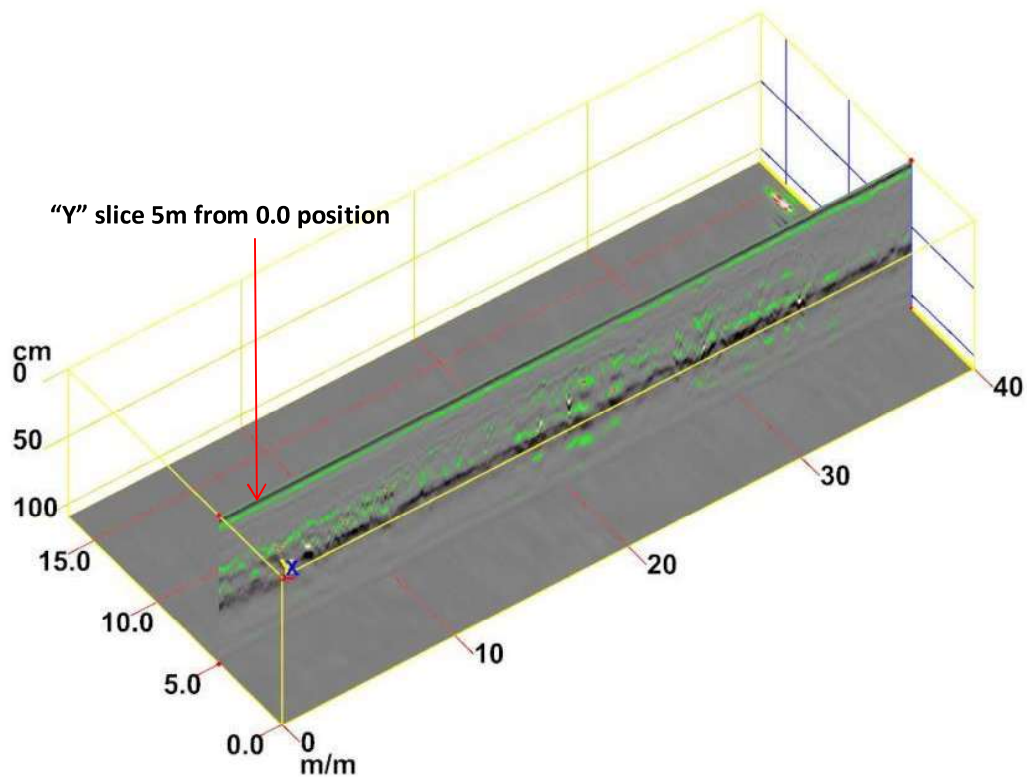
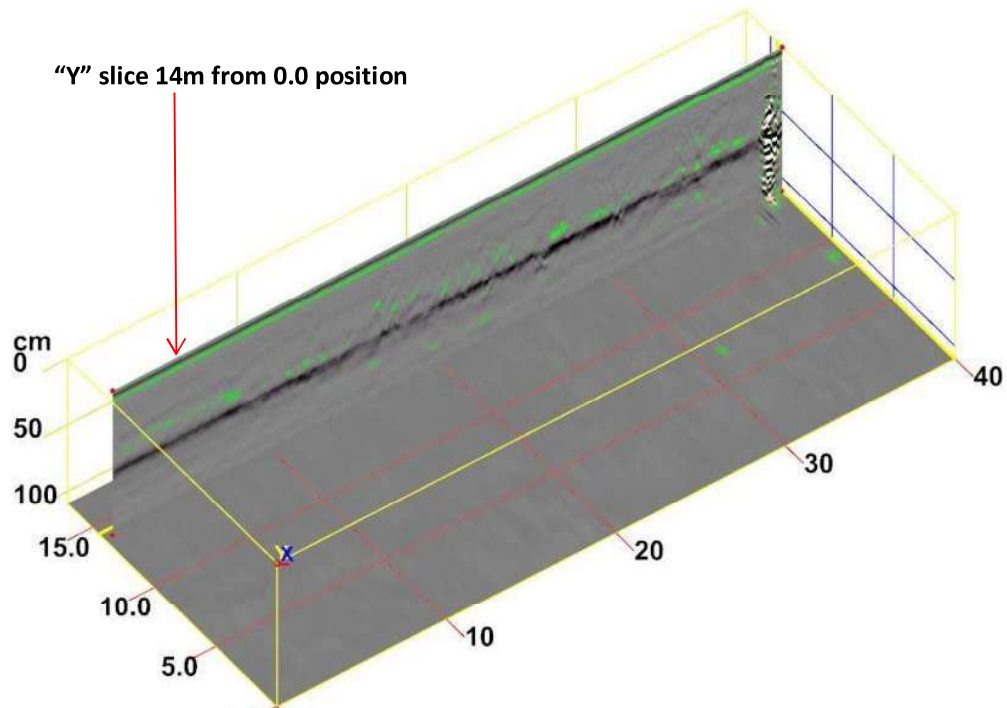
"Y" slice 17m from 0.0 position



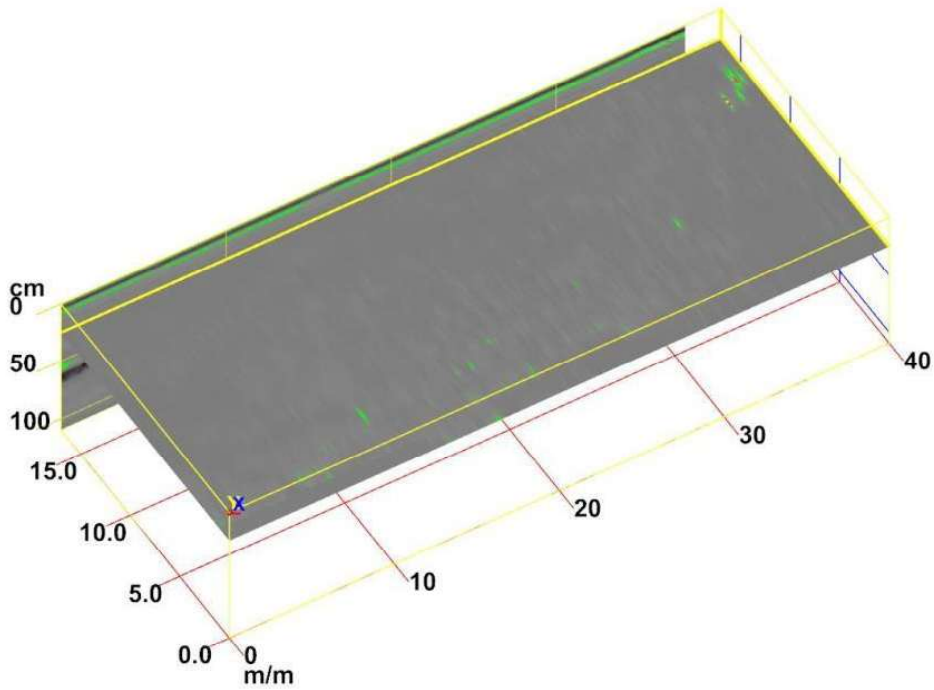
Layer indicating a change in geology at a depth of ± 56 cm below surface

"Y" slice 9m from 0.0 position



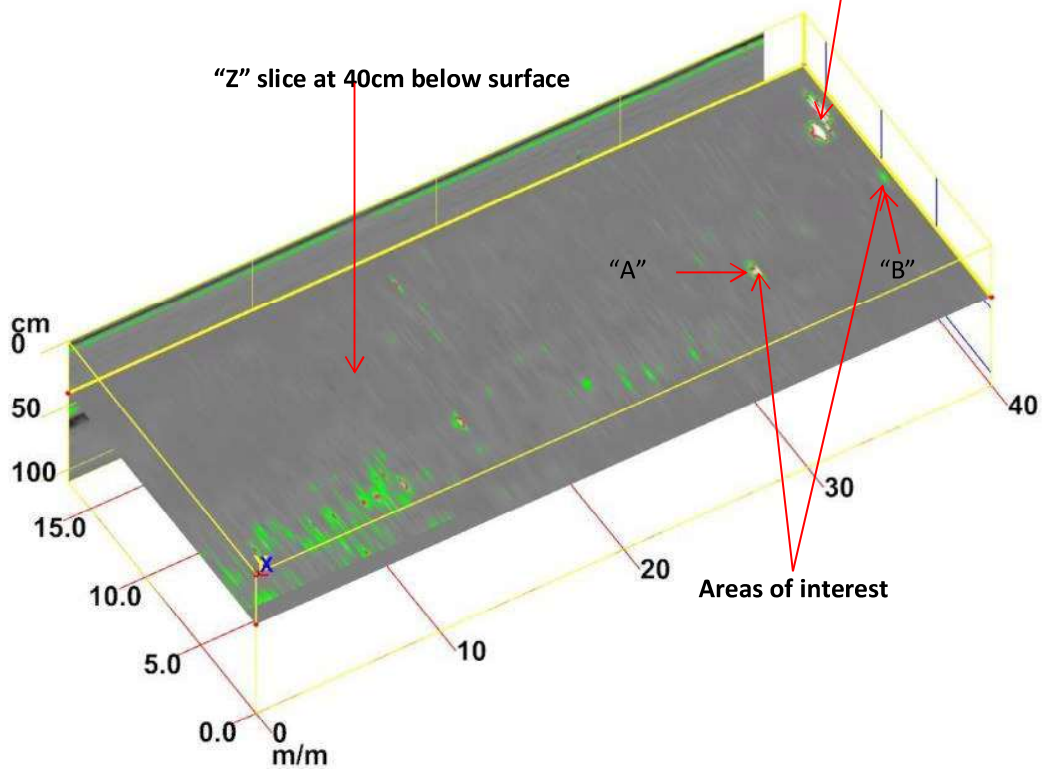


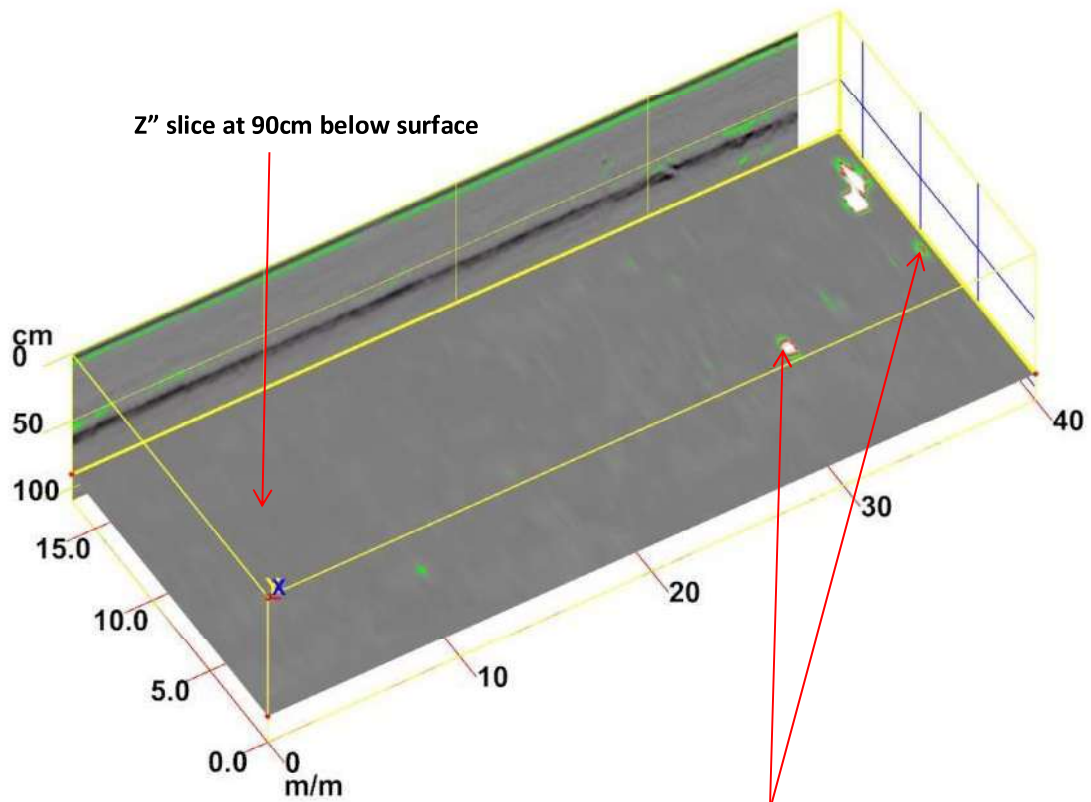
"Z" slice at 25cm below surface



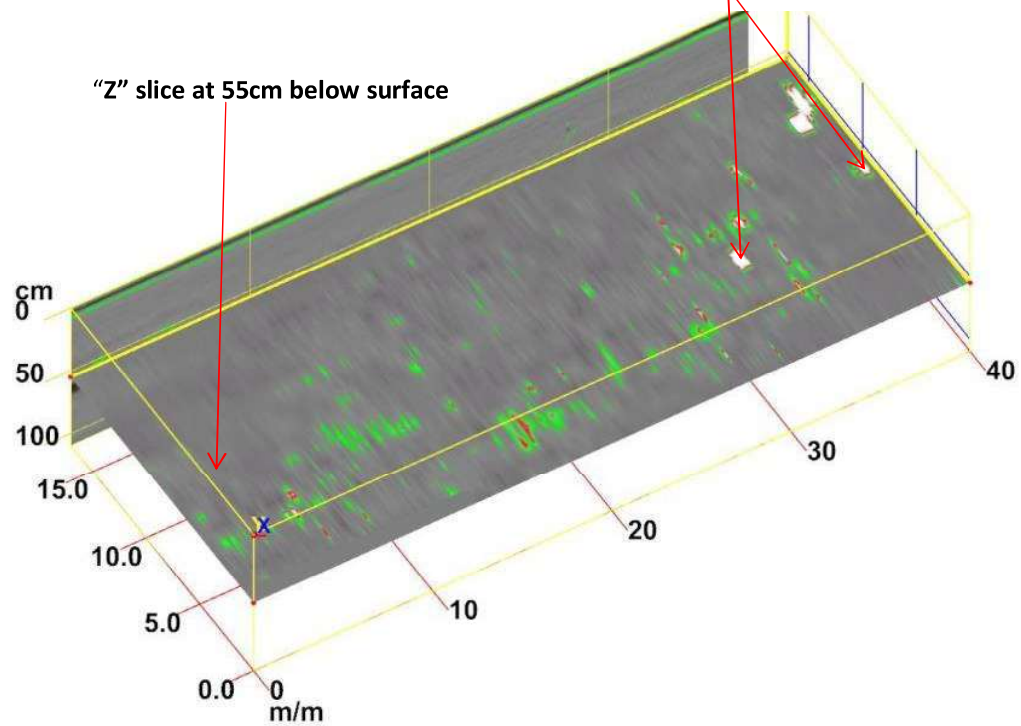
Telkom & Neotel manholes

"Z" slice at 40cm below surface

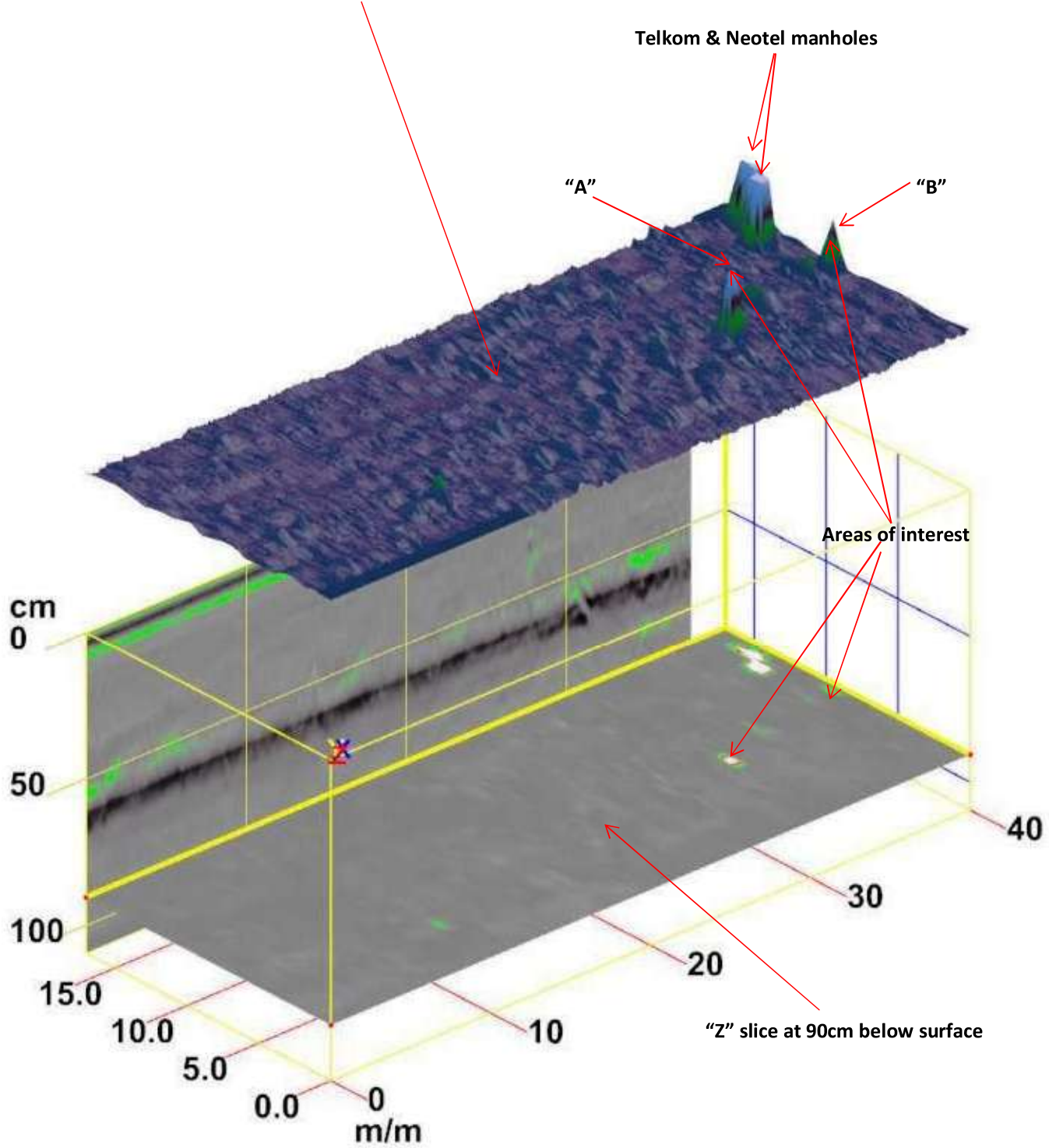




Areas of interest



Contoured image of "Z" slice showing anomalies from surface level to 90cm below surface



9. Limitations of results:

It should be noted that GPR and geophysical investigations and the interpretation of data from these investigations are inherently ambiguous. More than one source may have similar variations in the measured property, making it difficult to correctly interpret the results. In other words, the measured geophysical anomaly may have more than one interpretation and different physical sources may produce similar geophysical anomalies.

The depth to anomalies is determined by the velocity of the electromagnetic energy in the soil. In the case of Erf 4450 a dielectric constant of 9 was used for limestone and clay. Variations in the constant as a result of moisture or changes in the medium itself may produce incorrect depths because of an “incorrect” dielectric constant. In this case a change in the dielectric constant of the soil is expected at a depth of approximately 56cm below surface at the point where there is a drastic change in the geology on site. These variations are typically small and should typically not produce errors larger than 10% in depth estimation.

10. Conclusion:

The objects detected and marked out during the onsite survey represents linear objects that represents the remains of what is believed to be manmade infrastructure such as building foundations described in the ToR (vii), the ground disturbance that were detected was relatively shallow and on top of the change in geology situated at a depth of $\pm$ 56 cm below ground surface, the mentioned change in geology corresponds with the ToR (v) and extends across the sub-surface extent of Erf 44500.

During the onsite survey, no consistent high or lower density patterns of subsurface disturbance were detected that could reflect rows or row-like patterns, or infrequent random scatters of graves as described in the ToR (i, ii, iii & vi), with grave-like disturbance inferred to be variable in size, primarily rectangular in shape, but which may approach 'square shaped' disturbances (double or multiple graves) and which may approach 'oval' shapes. No disturbance other than objects "A" and "B" penetrated the geological member situated at 56cm below ground surface.

The off-site analysis of the GPR data highlighted the presence of two objects of interest marked as "A" and "B" in the 3D image on page 18.

The data suggests that that object "A" is a void measuring 1.5 m x 0.7m situated at approximately 30cm below the surface, it extends down to a depth of 1m below surface. This object seems to have a flat surface area that suggests that it could be an old sewerage pit or other manmade void. Object "A" is situated 9.7m from the Quinn Street sidewalk and 8.9m from the Lawrence Street kerb.

Object "B" is situated on the sidewalk, 0.9m from the Lawrence Street kerb. The object measures 1.2m x 0.6m and is situated at a depth of approximately 48cm below the surface and extends down to a depth of 90cm below the surface. This object represents a similar GPR signature as a void but no flat surface is present in this position.

It is suggested that the two objects of interest mentioned above be further investigated.

Through an analysis of the processed GPR data, no consistent high or lower density patterns of subsurface disturbance were detected that could reflect rows or row-like patterns of graves as described in the ToR (i, ii, iii & vi).



Barry Barnardt

05 February 2015

Terra Scan cc